An investigation into the relationship between coping strategies and suicidal ideation in a South African sample of male adolescents.

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Declaration

Unless specifically indicated to the contrary, this thesis is the result of my own work, all primary and secondary sources have been appropriately acknowledged. The dissertation has not previously been submitted to this or any other institution as part of an academic qualification.

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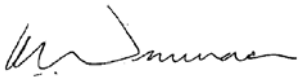

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Résumé
Dorothy Parker

Razors pain you;
Rivers are damp;
Acids stain you;
And drugs cause cramp.
Guns aren't lawful;
Nooses give;
Gas smells awful;
You might as well live.

Abstract

Adolescence is generally regarded as a time of developmental change in all aspects: physical, emotional and psychological. This change is difficult and stressful for the adolescent to comprehend and assimilate into their way of being. During these times of developmental change and stress the manner in which the adolescent chooses to or learns to cope with the various stressors they face can be a signifier of things to come. In other words, coping strategies that an individual chooses to use, be they functional or maladaptive, may inform their future. This study's focus is the relationship between an individual's ability to cope and his level of suicidal ideation, and explores whether these two variables are related. In South Africa, and throughout the world, there is a trend of a greater number of younger people engaging in suicidal behaviour than previously and research into any and all aspects of this phenomenon is thus valuable. Many hypotheses have been proposed and there are many related factors that need to be considered. A quantitative approach was used to examine the relationship between coping strategies and suicidal ideation. The *Coping Across Situations Questionnaire* and the *Suicidal Ideation Questionnaire* were administered to a sample of adolescent males at a co-educational high school in KwaZulu-Natal, South Africa. The results determined that there is a significant, positive relationship between maladaptive coping strategies and high levels of suicidal ideation, that demographic variables such as grade and race seem to have some impact on this relationship and that further investigation is necessary into the relationship between adaptive coping skills and low levels of suicidal ideation.

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Chapter 1

Introduction

Brief overview

Adolescence is generally regarded as a time of developmental change in all aspects: physical, emotional and psychological. This change is difficult for the adolescent to comprehend and assimilate into their way of being. Adolescents can experience considerable stress during times of developmental change and the manner in which they choose to or learn to cope with the various stressors they face can be a signifier of things to come. Those that use maladaptive coping strategies during adolescence may continue this into adulthood. In South Africa, and throughout the world, there is a trend towards more younger people engaging in suicidal behaviour than previously, when most evidence of suicide was found within the older generation (Schlebusch, 2005). Depression, feelings of helplessness and hopelessness, and inability to cope in stressful situations are all factors that can be said to contribute to this, "…many people who feel depressed and hopeless (typical triggers to acting on suicidal thoughts) imagine themselves to be even more alone and isolated than they actually are…" (Schlebusch, 2005, p. 1).

A study examining the relationship between coping skills and suicidal ideation in adolescence could inform future prevention efforts. This view is based on the hypothesis that there is a positive relationship between functional coping strategies and a positive outlook on life. Therefore the question that this research seeks to answer is: Is there a relationship between coping strategies and suicidal ideation in a South African sample of adolescents?

Kirkcaldy, Eysenck, and Siefen (2004) suggest that the number of adolescents thought to be experiencing suicidal ideation and who take part in self-destructive behaviour is significantly underestimated. They suggest that further research in the area of suicidal ideation and adolescence is crucial if greater understanding of this phenomenon is to inform prevention efforts.

Purpose of the study

Pienaar and Rothmann state, "research on suicidal ideation could be viewed as an important and critical component in evaluation and promoting adult mental health" (2005, p. 59). Research has found that there is a strong link between suicidal ideation (thoughts and cognitions about suicide) and suicide (Jin & Zhang, 1998 in Pienaar & Rothmann, 2005). It is possible that suicidal ideation could be considered an early indicator of more serious suicidal behaviour (Bonner & Rich, 1987; Reynolds, 1991a; Shea, 1998 in Pienaar & Rothmann, 2005). Firestone and Seiden (1990a) reported similarly with the idea of the continuum of self-destructive behaviour. They purport that suicidal intent exists along a continuum, a continuum with two processes: behavioural and cognitive, with suicide representing the merging of the two processes on the farther end of the continuum. Behavioural processes are those self-destructive actions, such as self-denial and substance abuse, which culminate in bodily harm while cognitive processes range from mild self-criticism to suicidal thoughts. Firestone and Seiden hypothesise that cognitive and behavioural processes "parallel each other; the actual suicide represents that acting out of the extreme end of the continuum" (1990a, p. 208). They state that many individuals can live for years on the minor side of the continuum however, any movement towards "successive levels" should be noted as an indicator that the individual "may have embarked on a serious regressive trend involving destructive acting-out behaviours and indicating an increased possibility of suicide" (1990a, 209). The concept of the self-destructive continuum strengthens the argument that suicidal ideation could be an indicator of further suicidal behaviour and should therefore be acknowledged and monitored.

Studies in the USA have found that "suicide and suicidal behaviours among youth are increasing at an alarming rate" (Kimmel & Weiner, 1995, in Madu & Matla, 2003, p. 126). Specifically the rate of suicide behaviours in the 15 to 24 year age group has increased radically since the 1970s, a phenomenon that has been noticed worldwide (Diekstra, 1989, in Madu & Matla, 2003). In South Africa the topic of adolescents, suicide and suicidal behaviour, has received relatively little attention, which is unexpected in light of the fact that suicidal behaviour, fatal and non fatal and including thoughts, threats, plans and attempts, is common among South African youth (Pillay & Wassenaar, 1997, in Madu & Matla, 2003).

Madu and Matla's study (2003) found "the mean ages for first suicide attempts to be 15.02 years for boys and 14.63 years for girls…[and that] first suicide attempts were highest among the 14, 15 and 16 year age groups" (2003, p. 131). Madu and Matla (2003) posit that these behaviours may be ignited by developmental changes in adolescence. Other research has noted that as the developmental changes occur the adolescents have underdeveloped skills to cope with the changes and the situations and environments in which they find themselves and have been found to resort to maladaptive strategies in order to attempt to cope with the change (Suldo et al., 2008a). Evidence indicates that boys engaging in suicidal behaviour are more likely to complete suicide than girls who engage in suicidal behaviour (CDC, 2000; Garrison et al., 1993; Gould et al., 1998; Lewinsohn et al., 1996 in King & Apter, 2003, p.14). This justifies research focussing specifically on male adolescents. Information regarding male adolescent suicidal behaviour could generate information helpful for intervention.

Chapter 2

Literature Review

Adolescence

Adolescent development

Development can be defined as "changes in the structure, thought or behaviour of the individual over time" (Duncan, 1997 in de la Rey, Duncan, Shefer & van Niekerk, 1997, p. 197) and is influenced by biological factors as well as the living environment of the individual. Though genetics influences most aspects of growth, the environment in which the individual develops will either nurture or destroy potential with which the individual is born (Duncan, 1997).

Adolescence is described as that stage of development that begins with puberty and ends when certain conflicts and life tasks have been negotiated and adulthood is then entered into. For the purpose of this study an adolescent is an individual between the ages of 14 and 24. According to Erikson, human development occurs in eight stages each characterised by a crisis that needs to be resolved. "The eight stages represent points along a continuum of development in which physical, cognitive, instinctual, and sexual changes combine to trigger an internal crisis" (Sadock & Sadock, 2007, p. 208). Resolution of the crises can be achieved either negatively through regression or more positively through growth. Adolescence is that stage where the conflict between identity and role confusion is predominant. At this stage the adolescent is preoccupied with the question of identity and is concerned with how he sees himself, how he presents himself, and how he is viewed in the eyes of others especially in comparison to how he feels he is. At this stage the adolescent is torn between child- and adulthood, his "childhood roles and fantasies are no longer appropriate yet the adolescent is far from equipped to become an adult" (Sadock & Sadock, 2007, p. 210). Being unable to master this stage of development may mean that the adolescent does not have a strong sense of self and feels bewildered about his place in the world.

Erikson's idea of development occurring with the resolution of a crisis is echoed by Frydenberg (1997) who views adolescence in terms of lifespan: a perspective that purports

that “focus on the mastery of developmental transitions” will increase “self esteem, self-efficacy and internal control” (Frydenberg, 1997 in Moore 1999, p. 66).

During adolescence individuals become preoccupied with their own identity as well as how others perceive them. They are desperate to achieve a sense of belonging independent of parental constraints and “establish a secure personal identity” (Duncan, 1997 in de la Rey Duncan, Shefer & van Niekerk, 1997, p. 121). Adolescence is a time of great change in all areas of the young person’s life, physically, emotionally and cognitively. Eccles (n.d.) believes that no other developmental stage is fraught with so many different kinds of changes at the same time. She believes that “with rapid change comes a heightened potential for both positive and negative outcomes. Although most individuals pass through this developmental period without excessively high levels of "storm and stress,” a substantial number of individuals do experience some difficulties” (Eccles, n.d., p. 1). Demands such as “restructuring of the identity, building up of heterosexual relationships and the choice of occupation” all place strain on the adolescent, causing them to experience some difficulty (Seiffge-Krenke & Shulman, 1990, p. 351). During adolescence individuals are “particularly vulnerable to the negative effects of stress…if [] problems are not addressed, adolescents are at risk for compromised physical and mental health as adults” (Suldo, Shaunessy & Hardesty, 2008b, p. 273). Experiencing levels of stress within a normal range is an adaptive experience. However, “chronic stimulation of the stress-response system [either by biological or environmental stress] has been linked to depressed immune functions and diminished life satisfaction” (Suldo et al., 2008b, p. 273). This claim raises the question of why some adolescents are more able to deal with stressful situations in a positive, adaptive manner than others.

Lazarus and Folkman (1984) examine the concept of stress from a transactional perspective. They focus on the concept of perceived stress, referring to instances when an external event brings about distress in an individual, be it cognitive or physiological, which surpasses his or her emotional and behavioural capability. By conceptualising stress in this way it is feasible to consider that “certain individuals may possess resources, such as coping, that allow them to experience external stress without experiencing compromised functioning” (Suldo et al., 2008b, p. 274). It follows then, that an examination of coping strategies used by a sample of adolescents may be helpful in shedding light on how adolescents may differ in dealing with stress and difficulties.

Coping

Perspectives on coping

Coping can be examined from theoretical and research perspectives, namely a psychoanalytic approach, a transactional approach, and an approach focussed on the convergence of personality and coping. Researchers seem to have always been concerned with the way in which people adjust to difficult situations, though research has mostly focused on adult populations (Suls, David & Harvey, 1996). Coping is described as complex and not easily explained by a single theory (Reeves, Merriam & Courtenay, 1999). It can be defined as "constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (Lazarus & Folkman, 1984 in Suldo et al., 2008b, p. 274).

From a psychodynamic perspective coping was viewed as a means of dealing with unconscious drives or conflicts, specifically sexual and aggressive internal conflicts. In essence coping strategies were seen as similar to defense mechanisms (Suls et al., 1996). These defense mechanisms enable an individual to change the way in which they view a stressful event in order to reduce the stress experienced. It is important to realise that defense mechanisms and coping strategies were not seen as the same thing; though mental processes were imagined to be the same, behaviours were seen to be different.

> Behaviour associated with defense mechanisms was presumed to be rigid, reality-distorting, driven by issues from the past, and derived from unconscious elements. Behaviour associated with coping mechanisms was assumed to be flexible and purposive, reality- and future-oriented, and derived from conscious and preconscious elements. (Haan, 1963 in Suls, et al., 1996, p. 713)

The ego psychology approach to understanding coping is the approach that has been the focus of most research on coping. However, it does not deem external factors to be significant in the examination of an individual's attempts to cope, preferring rather to focus on an individual's internal and psychological processes evident in his or her use of defense mechanisms (Reeves, Merriam & Courtenay, 1999). This is in stark opposition to the transactional approach discussed below, an approach that widened the margins of coping

beyond defense to include cognitive and behavioural responses used by ordinary people experiencing stressful daily events (Reeves, Merriam & Courtenay, 1999).

A transactional perspective on stress and coping was introduced in the mid 1960s by Lazarus. This perspective tended to focus on processes rather than structures. Coping "was conceptualised as a transactional process or exchange between person and environment with an emphasis on process (i.e., change) rather than on personality traits" (Folkman & Lazarus, 1985; Lazarus, 1966; Lazarus & Folkman, 1984 in Suls et al., 1996, p. 715). A transactional approach is one that places coping in a cognitive framework with an emphasis on external factors (Reeves, Merriam & Courtenay, 1999). In this approach coping is viewed as a conscious process that focuses on what the individual "actually thinks or does in a specific context" (Lazarus & Folkman, 1984, in Reeves, Merriam & Courtenay, 1999 p. 344). From this view coping is defined, by Folkman and Moskowitz, as "the thoughts and behaviours used to manage the internal and external demands of situations that are appraised as stressful" (2004, p. 745). This model of stress places coping in a functional role that seems to simplify the many different functions and types of coping that an adolescent may employ in dealing with stress. The model simplifies coping as either emotion-focused or problem-focused sidelining other ways of coping used by this population group (Suldo, Shaunessy, Michalowski & Shaffer, 2008a). Despite this shortfall, the approach does view the concept of coping in a new manner. Until very recently, studies on the topic of coping have mostly concentrated in areas where individuals have faced traumatic life events and have implemented coping strategies in response to these extreme situations. Furthermore, most studies historically focus on adult populations, examining coping and coping strategies from the adult perspective (Seiffge-Krenke & Shulman, 1990; Suldo et al., 2008b). Seiffge-Krenke (1986) determined that only 7.2 per cent of the empirical studies examining coping dealt directly with adolescents (Seiffge-Krenke & Shulman, 1990). It can be assumed that this figure has risen in the past 20 years. However there is seemingly still a lack of information and research in the area of adolescent coping.

A third approach to coping tends to consider both personality and situations. Taylor (1983, 1989 in Suls et al., 1996, pp. 720-721) believes that "in the face of adversity people develop positive illusions…which in turn are associated with positive outcomes and adjustment". In current research more emphasis is placed on the idea that stressful events and situations can

influence one's personality in a positive or negative manner and that interaction with stressors can influence the way in which one copes in the future (Suls et al., 1996).

Coping has been researched in the "hope that the concept of coping might help explain better why some individuals fare better than others do when encountering stress in their lives" (Folkman & Moskowitz, 2004, p. 746). But stress itself is a complex issue. Aldwin (1994 in Reeves et al., 1999) believes that stress is universal and that it would be short sighted to believe that the effect of stress on adaptation is purely negative. Coping with stress can impact positively in that it can foster change and growth rather than uphold inactivity, where a stagnant way of being is maintained. This is because "when coping is transformational, change occurs, and this change may be minor or major, positive or negative, transient or permanent. When coping, however, is manifested as a homeostatic strategy, emotions are managed, problems are solved and life returns to normal" (Reeves et al., 1999, p. 345-6).

Awareness of this distinction between manifestations of coping is important in a study such as this. Historically, coping has been examined as a response mechanism; that is how people cope after stressful events have occurred. A recent development in coping research has been to examine "the ways people cope in advance to prevent or mute the impact of events that are potential stressors" (Aspinwall & Taylor, 1997, in Folkman & Moskowitz, 2004, p. 757).

Coping strategies

Lazarus and Folkman (1984) differentiate between two types of coping strategies in their research with adults defining coping as either problem- or emotion-focussed. However it is unclear whether stress experienced by adolescents can be spilt between these two dimensions. In problem-focussed coping the individual will determine the actual source of the stress and will make conscious decisions to act in a way that addresses the source of the stress. Emotion-focussed coping on the other hand occurs when an individual "engages in activities to alleviate the emotional distress caused by the stressor" and not the actual source of the stress itself (Suldo et al., 2008b, p. 274). Research in the area of problem- and emotion-focussed stress with adolescents indicates that those adolescents who activate emotion-focussed coping strategies are more likely to use substances, than those that choose to adopt a problem-focussed approach to alleviating the stress (Suldo et al., 2008b). Lazarus and Folkman point out that a situation needs to be appraised in order to determine whether to implement emotion- or problem-focussed coping. This is done in two phases: primary and

secondary appraisal. "Primary appraisal is a cognitive process whereby one assesses what is at stake in a given stressful situation" (Suls et al., 1996, p. 715). Secondary appraisal occurs when the available coping resources are examined and it is determined whether the situation is malleable or not. It is believed that if a problem is seen as changeable, a more focussed problem solving approach to the problem will be taken. However if the problem is perceived to be immovable emotion-focussed coping strategies will be implemented in an attempt to relieve the distress (Suls et al., 1996).

Suldo et al. (2008b) also determine coping along three dimensions. They studied coping in a sample of high-achieving high school students between 14 and 19 years old. They determined that those students who were able to find positive outlets for stress, such as talking with family members and interacting with friends, more often had happier lives than those individuals who relied on "negative avoidance coping…such as substance use…to cope with stress". Those individuals who implemented "negative avoidance coping" were more likely to internalise their feelings and more likely to experience problems in the future (Suldo et al., 2008b, p. 286). Students who used maladaptive coping strategies also used externalising techniques to deal with stress. These students adopted an external locus of control. They were very aggressive, blamed others for their situation and often yelled to deal with their frustration (Suldo et al., 2008b). Suldo et al. (2008b) found that individuals, such as these students, that do adopt a maladaptive coping strategy need to be encouraged to use more adaptive coping strategies which "may help buffer the negative impact of stress on mental health outcomes" (Suldo et al., 2008b, p. 288).

Although one particular coping strategy may dominate in an attempt to ease a perceived stressful situation, an individual may implement more than one coping strategy depending on what is felt to be necessary for that situation. This supports the idea that "situations rather than dispositions determine coping behaviour" (Suls et al., 1996, p. 715) in opposition to Haan (1977) who purports that an individual is either "a coper or an avoider" (in Seiffge-Krenke & Shulman, 1990, p. 368). "Lazarus et al. (1974), regard both active and passive modes of coping as potentially appropriate ways of dealing with environmental demands" (Seiffge-Krenke & Shulman, 1990, p. 367). From this perspective it is not necessarily possible to categorise an individual as either an approacher or an avoider in their specific coping style. Some individuals are instead able to oscillate among a variety of coping styles (Seiffge-Krenke & Shulman, 1990). Coping strategies are neither good nor bad and should

be examined within the context of the individual, by way of an evaluation of the "adaptive qualities of coping processes…in the specific stressful context in which they occur" (Folkman & Moskowitz, 2004, p. 753).

This research was based on Seiffge-Krenke's definition and model of coping. She refers to the definition conceived by Lazarus, Averill and Opton (1974) in her work on coping. Thus coping is defined as "problem-solving efforts made by an individual when the demands he/she faces are highly relevant …and tax his/her adaptive responses" an explanation that could aid in an attempt to examine the manner in which adolescents adapt to developmental change (in Seiffge-Krenke & Shulman, 1990, p. 351). Seiffge-Krenke's model of coping demonstrates that people react either passively or actively to the strain of their environment, fitting within the framework for understanding coping strategies set out by Folkman and Lazarus. However Seiffge-Krenke's study with Shulman (1990, cited in Meehan, 2007) "determines coping along three dimensions rather than two: (a) *active coping*, which includes actively seeking support and taking advice, (b) *internal coping*, which includes appraising the situation and searching for a compromise, and (c) *withdrawal coping*, which is indicative of withdrawing from the situation and using denial" (Seiffge-Krenke, 1992 in Meehan, 2007, p. 558). Active coping and internal coping are seen as two modes of functional coping, whereas withdrawal from a situation in order to better cope with it is seen as a maladaptive coping strategy.

A literature search suggests that coping and strategies associated with coping have received little attention in research in South Africa. Seiffge-Krenke's instrument used to assess coping was used in this study. It is an instrument that assesses eight different types of stressful areas that may occur in an adolescent's life, thereby helping researchers to have a broader picture of adolescent stress and coping tools (Meehan, 2007).

Gender and coping among adolescents.

The research on youth and stress has largely focused on low socioeconomic groups and ethnic minority students. Numerous "longitudinal studies with these groups have…found that stress precedes the development of psychopathology" (Suldo et al., 2008a, p. 960). Despite this focus it is feasible to extrapolate that the relationship between stress and psychopathology demonstrates the significance of managing stress during adolescence and hence the importance of encouraging adolescents to implement adaptive rather than

maladaptive coping strategies. The coping strategies used do not wholly determine whether psychopathological symptoms will arise from increased stress however it does impact "the extent to which psychopathological symptoms will result from elevated stress" (Suldo et al., 2008a, p. 961). During adolescence individuals face internal and external changes and the way in which they respond to events they perceive to be stressful may be a factor in ascertaining levels of suicidal ideation (Meehan, 2007).

Several important mechanisms for coping have been identified in studies on children and adolescents. "Social bonds and relationships, interpersonal, cognitive problem-solving skills, and personality styles" all need to be considered when examining the coping style of an adolescent or child (Prior, 1999 in Frydenberg, 1999, p. 34). These mechanisms can all be seen as protective factors if they are experienced positively in the child or adolescent's life. However, "high stress along with low levels of protective factors… [have been] associated with poor coping by children" (Prior, 1999 in Frydenberg, 1999, p. 38).

There has also been research that not only focused on adolescent coping styles but also suggests that coping styles differ between the genders. Seiffge-Krenke and Shulman (1990) determined that boys were more likely to be active in their overall coping style in comparison to girls. However, boys were found to be passive in comparison to girls, in seeking help or guidance from their social networks. Females in the studies actively sought support from those around them during times of stress, whereas males were more likely to implement other strategies for coping.

The literature on gender difference and coping echoes this finding and illustrates consistent difference between girls and boys indicating that the genders differ on the coping mechanisms implemented. On the whole girls are better able to cope with stress than boys. Boys are more often seen to use aggressive behaviour and denial to deal with stress, "physical action-based coping strategies and problem solving [while] girls seem to find it easier to talk about problems and to work towards solutions with the help of friends and other sources of social and emotional support" (Prior, 1999 in Frydenburg, 1999, p. 46).

The impact of cultural influences on coping strategies implemented by individuals cannot be ignored. This is especially relevant when examining the manner in which cultural influences impact the coping strategies implemented by boys and girls within the same cultural context.

Frydenburg (1999) notes the relevance of this during a time of developmental transitions such as adolescence, “context and culture can provide both a resource and a challenge to the individual in the pursuit of social, emotional and developmental maturity” (p. 342).

Cultural context influences all individuals, creating community conventions or cultural norms that are usually practised by the dominant culture and usually include social practices, and gender expectations. These norms can differ for boys and for girls as expectations for individuals of each gender can differ. The differing expectations influence the coping skills the individual chooses to depend on and implement in situations deemed to be stressful (this in itself is something that is often influenced by cultural context). The expectations of their community, generally based on societal conventions, will encourage or persuade individuals to implement coping strategies similar to those implemented by boys or girls gone before them in that community. Commonly, these expectations are not questioned, as they seem to be part of the developmental process in that group of people, seen as inherent rather than strange or odd. A common example is that of the stereotype that holds that boys don’t cry. Boys who grow up in a community that stands by this belief are encouraged to hold their emotions in check and not show their feelings or seek support from others, but rather to display a tough guy persona. They are thereby persuaded, directly or indirectly, to adopt a coping strategy that incorporates coping skills that may include denial or encourage a display of aggression or use of physical activity. In opposition to this “in the Italian culture, higher levels of reactivity and intensity of emotional expression are culturally sanctioned” (Prior, 1999 in Frydenberg, 1999, p. 47) which in turn impacts the coping strategies implemented by individuals and fuels the fire of the stereotype that Italian men are ‘mamma’s boys’ and ‘cry babies’. Hence “different person-environment interactions may be relevant to adjustment” (Prior, 1999 in Frydenberg, 1999, p. 47).

Not only is the cultural context and norms of a group relevant to a discussion on coping but also what a community determines is or isn’t stressful. Mental representation of a stressor differs from one person to the next and from one community to the next. Stresses are interpreted on the basis of ideals and beliefs of an individual and of a community and these differ depending on the context lived in (Boekaerts, 1999 in Frydenberg, 1999).

Subgroups within cultures and communities such as family groups and peer groups also impact an individual’s ability to cope. Saljo (1999) found that where people in an

individual's life believe in the capability of the individual to cope, succeed and perform, the individual does better (in Frydenburg, 1999). Therefore the manner in which the adolescent copes with a transition such as adolescence can be determined by support from peers and family.

The relevance of context to coping strategies is essential. However, it was not a focus of the current research due to the limited scope of this thesis.

Suicide and Suicidal Behaviour

Definitions of relevant terms

Terms relevant to this study have been defined numerous times in other research in many ways. A few different definitions have been given below but this list is by no means exhaustive. The variety and sheer number of different definitions have also made the task of comparing data across nations especially difficult as what one researcher may define as parasuicide may be defined differently by another. Apter and Wasserman (2003) stress this point stating that "cross-national data on adolescent attempted suicide [has been difficult to obtain] owing to differences in definitions and difficulties in survey design" (in King & Apter, 2003, p. 66).

For the purpose of this study, terms are defined as follows:

Table 1

Definitions of Suicide Related Terms

Suicidal behaviour	Suicidal behaviour, as defined in this study, denotes a wide range of self-destructive or self-damaging acts in which people engage - either predetermined or impulsively - with varying degrees of motive, lethal intent and awareness of the outcome and consequences. It includes suicidal thoughts, threats, plans and attempts (Schlebusch, 1990 in Madu & Matla, 2003, p. 126)
Suicidal ideation	"The occurrence of any thoughts about self-destructive behaviour, whether or not death is intended" (van Heeringen, 2001, p. 4)
Non-fatal suicidal behaviour (NFSB)	"An act with non-fatal outcome, in which an individual deliberately initiates a non-habitual behaviour that, without intervention from others, will cause self harm, or deliberately ingests a substance in excess of the prescribed or generally recognized therapeutic dosage, and which is aimed at realising changes which the subject desired via the actual or expected physical consequences" (WHO/EURO, 1986)
Fatal suicidal behaviour (FSB)	When suicidal behaviour results in death.

Suicidal behaviour and adolescence

Pillay and Wassenaar (1997a) argue that prevalence of suicidal behaviour in adolescents in South Africa is on a par with adolescent suicidal behaviour in most Western countries and report that at this stage of life individuals have a high risk of engaging in such behaviours. Evidence seems to suggest that "suicidal behaviour begins to appear at significant levels during puberty and increases in prevalence thereafter, reaching its highest levels in the late teens" (Rutter, Taylor and Hersov, 1994 in Madu & Matla, 2003, p. 127).

Suicidal ideation

Suicidal behaviour cannot be restricted to very specific rule-bound definitions but is rather "plotted on a continuum varying in severity from ideation to intent, attempt and completion. Therefore, suicide ideation constitutes one aspect of suicidal behaviour" (Reynolds, 1991a in Pienaar & Rothmann, 2005, p. 59). Firestone and Seiden (1990a) view suicidal behaviour on

a continuum of behavioural and cognitive processes termed the continuum of self-destructive behaviour. The continuum denotes levels of increasing suicidal intention from low self-esteem dominated by self-criticism to intense distress and agitation where physical self-harm, and thoughts and actions regarding the details of the suicidal act are engaged in. In this light suicidal ideation is part of a continuum where, when paired with behavioural process, can on occasion lead to fatal suicidal behaviour.

"Suicide ideation may be characterised as ranging from relatively mild, general thoughts and wishes that one were dead to serious ideation about specific plans and means of taking one's life" (Pienaar & Rothmann, 2005, p. 59). Suicidal ideation can also be defined as "the domain of thoughts and ideas about death, suicide and serious self-injurious behaviour, and includes thoughts related to planning, conduct and outcome of suicidal behaviour, particularly…thoughts about the response of others" (Reynolds, 1991a in Pienaar & Rothmann, 2005, p. 59). Most individuals have at some stage of their life experienced some sort of suicidal ideation; whether it was fleeting or ongoing is the concern. Continuously thinking about, planning or envisioning aspects of one's own death at one's own hand, would deem the individual a suicidal ideator. Ideation can be a predictor of actual suicidal behaviour, fatal or non-fatal. It is essential that an individual's ideation is not merely dismissed, whether it is believed there is intent or not, but rather the individual's distress should be acknowledged. It is very important that those individuals who seem to have developed a plan, detailed or not, regarding things such as the manner, method, date, and time of suicide are "taken very seriously, as this suggests a rather advanced stage of suicide ideation. Threats made, directly or indirectly, should not be ignored, as they are an indication that the [individual] has thought about suicide as a way of dealing with the particular stressor" (Pillay & Wassenaar, 2007a, p. 216). Suicidal ideation may be expressed in a variety of ways - thoughts, behaviours, and actions - and awareness of the possibilities is imperative to ensure identification of people in need of support and help more rapidly. Suicidal ideation can also reflect distress in an individual of which there may be a number of causes. It "may indicate discontent with present living conditions, or may act as a warning signal for individuals in situations which are perceived as stressful. … It reflects ambivalence, the hopes and illusions for the future [of the individual]; it reflects the evaluations of the quality of life which co-vary with life events and changing conditions of living… [and it may reflect] threats people perceive to their self-esteem" (Kerkhof & Arensman, 2001 in van Heeringen, 2001, p. 18).

A closer examination of those individuals who experience suicidal ideation and measure high on suicidal ideation scales, revealed that these individuals "wish they had never been born, feel life is not worth living, wish they were dead and think that others would realise their worth when they are dead. They have thoughts of killing themselves as well as thoughts on the specific methods that can be used and times or places at which to kill themselves" (Pienaar & Rothmann, 2005, p. 59). These individuals seem to experience a feeling of being unable to go on and feel unable to cope with the situation in which they find themselves. Incidence of suicide and ideation is not confined to adult populations, where in actual fact it seems that with growing older the prevalence of suicidal ideation decreases. Suicidal ideation is increasingly reported in individuals in the developmental stage of adolescence. Findings from self-report questionnaires seem to indicate that it is normal and common for adolescents to consider suicide as a way of coping with conflict (Kerkhof & Arensman, 2001 in van Heeringen, 2001). Certain risk factors related to suicidal ideation, such as being female, having been married, being younger than 25 years old and having a poor education as well as suffering from a psychiatric disorder, have been determined to indicate whether someone is more or less likely than another individual to have suicidal preoccupations (Kerkhof & Arensman, 2001 in van Heeringen, 2001).

Historically it has been believed that suicidal ideation was the problem of those individuals diagnosed with a psychological disorder. However findings from a German study on suicidal ideation and adolescents determined that suicidal ideation is a common behaviour in clinical and non-clinical samples (Kirkcaldy, Eysenck & Siefen, 2004). This finding illustrates that research in the area of ideation in non-clinical samples is just as relevant, and possibly more so, than in clinical samples. In clinical settings, those around the individual experiencing the ideation are aware that suicide and suicidal ideation is a probable experience the patient is having. However, in common everyday environments suicidal behaviour is not expected and people seem to believe that if one is suicidal it will be immediately apparent to the observers. This is not the case: suicidal behaviour and ideation is far more common in non-clinical populations than previously thought and awareness around this topic should be built.

It seems that it is normal for suicidal ideation to increase in those who have been left behind after exposure to a completed suicide. Melham, Day, Shear, Day, Reynolds and Brent (2004) found this to be true of adolescents who lost a peer to suicide (Melham et al., 2004, in Debski et al., 2007). There is not a great wealth of research done on suicide as "infectious", however

the research that has been completed in this area found that "suicidal contagion…accounts for 1%-3% of adolescent suicides" (Moscicki, 1995 in Debski, et al., 2007, p. 160). This is an important point to consider in ideation research. The context in which the participants are located, including past events, recent or not, needs to be considered before a reason or conclusion can be found for prevalence of suicidal ideation in an individual or not. Even though research is minimal and the percentage of suicide attributed to suicidal contagion is extremely low, there is still a relationship between suicide and ideation, which needs to be considered. As a researcher it is imperative that all aspects of a problem, regardless of perceived relevance, are taken into account.

In South African studies

Literature suggests that adolescent suicidal behaviour is as prevalent in South African populations as it is in most other Western countries and that adolescents are seen to be more greatly at risk for such behaviours than other members of the population (Pillay & Wassenaar, 1997b). A 1999 study completed in Limpopo province found that prevalence of suicidal behaviours in the early and late adolescent age group was increasing (Mhlongo & Peltzer, 1999 in Mashego & Madu, 2009). This is in line with the view worldwide that adolescents are engaging in suicide related behaviours more often than in the past (Au, Lau & Lee, 2009; Biong & Ravndal, 2007; de Mattos Souza, da Silva, Jansen, Kuhn, Horta & Pinheiro, 2010).

Research in the Pietermaritzburg area of KwaZulu-Natal, a province on the east coast of South Africa found "high rate of suicidal ideation [] among adolescents whose parents were strict regarding dating" (Pillay and Wassenaar, 1997a, p. 227). The adolescent may begin to feel trapped and unheard by their parents and may begin to think about and consider suicidal behaviour in an attempt to draw attention to the problem (Pillay & Wassenaar, 1997).

Mashego and Madu (2009) in their research on suicide-related behaviours among secondary school adolescents in the Bethlehem and Welkom areas in South Africa found there to be no significant difference in suicidal ideation between male and female participants. This is in contradiction to Madu and Matla's (2003) finding that suicidal ideation was higher among females than males in a study conducted in the Limpopo province of South Africa. Mashego and Madu (2009) also reported no significant difference in prevalence of suicidal ideation among participants of different age groups, categorised into early and late adolescence, again

in opposition to what was found in Madu and Matla's (2003) study. Mashego and Madu state that "the prevalence of pervasive suicidal ideation (almost every day, in the past two weeks) (12.0%) [that was observed in their study] falls within the range of those observed in the US" (2009, p. 495). Their paper cites numerous studies that support this finding with the range of prevalence in the United States (US) being 10–20 per cent. However, studies completed in other parts of South Africa indicate a range that is higher than that found by Mashego and Madu (Flisher, Joubert & Yach, 1992; Madu & Matla, 2003).

A 2010 study in Mauritius and South Africa, focusing on adolescent girls determined that the percentage of Mauritian, (26.3%) and South Africa (21.5%) girls who had "thought about self-harm during the past 5 years" (Pillay, Bundhoo & Bhowon, 2010, p. 91) had increased slightly from "the 19% reported in the 1st South African National Youth Risk Behaviour Survey" of 2003 (Pillay, Bundhoo & Bhowon, 2010, p.91). The authors did point out however, that the discrepancy in the terms used in the different research as well as the different criteria used may explain the disparity. Still, they do state that the rates are nevertheless disturbing especially if one notes that over the past few decades the suicide rates of adolescents have increased in both Mauritius and South Africa (Pillay, Bundhoo & Bhowon, 2010).

Non-fatal suicide behaviour

In South Africa

Parallel trends between South Africa and the rest of the world "in fatal suicidal behaviour, and international averages" have been noted. It may therefore be assumed that rates of non-fatal suicidal behaviour (NFSB) in South Africa for all race or cultural groups will be similar to international trends, and will accordingly be significantly higher than those of fatal suicide (Pillay et al., 2004, p. 351).

When considering individuals participating in non-fatal suicidal behaviour it has been found that women are far more likely than men to be reported as the survivor. Investigations generally show more female cases of non-fatal suicidal behaviour than male with the ratio normally about 2.5:1 (Deonarain & Pillay, 2000; Pillay et al., 2004). This seems to imply that non-fatal suicide behaviour is viewed as a feminine act, a call for help rather than fatal suicide behaviour, which is more likely to be viewed as taking control and completing what

one sets one's mind to; a reflection of stereotypical views of masculinity. This difference between genders is discussed in a later section.

In adolescents

Research suggests that "attempted suicides significantly outnumber completed suicides" in the adolescent population (Madu & Matla, 2003, p. 127). Regardless of this, fatal suicidal behaviour in adolescents gets more attention. This is probably the product of many things, including the fact that not all non-fatal suicide behaviour is reported and documented and its prevalence therefore is underestimated (Kirkcaldy, Eysenck & Siefen, 2004). This may be due to feelings of shame or embarrassment on the part of the individual or his or her family or the desire to forget the incident. However, it has also been found that the more an individual engages in non-fatal suicidal behaviour, the greater the possibility that completed suicide will be the eventual outcome. This illustrates the necessity for research on non-fatal suicidal behaviour (King, Ruchkin & Schwab-Stone, 2003). In adolescence, a time of great change and uncertainty, non-fatal suicidal behaviour needs to be understood rather than ignored in order to decrease the number of individuals who engage in this behaviour and in turn to decrease the number of fatalities.

> Non-fatal suicide behaviours in adolescents should…be understood as expressions of the powerlessness and hopelessness that they feel in the face of conflict situations. These account for their resultant turn to suicidal behaviour as *(i)* a temporary escape from the prevailing stress; and (*ii)* a way of communicating their distress. (Pillay & Wassenaar, 2007, p. 217).

A number of reasons have been suggested to explain NFSB. One such reason was explicated in a 1997 study in South Africa. It was found that, in comparison to non-suicidal controls, individuals who had engaged in suicidal behaviour and had survived reported low family adaptability, suggesting rigid family functioning. The authors report that the subjects who took part in their research were "dissatisfied with the unyielding structure [of the family] which cannot accommodate striving for autonomy" (Pillay and Wassenaar, 1997a, p. 230). A negative correlation between hopelessness and family satisfaction (r=-0.61) was also reported in the 1997 study. Pillay and Wassenaar (1997a) "deduce[] that a close relationship exists between low family satisfaction and suicidal intent" (1997a, p. 230).

In their unpublished research on psychosocial problems faced by learners in the greater Pietermartizburg area Barnes, Burke, Theron and Zuma (2009) examined another aspect of

family relations and found that in addition to over-involvement, a *lack* of parental involvement can also cause a child to feel alone and unable to cope with any difficulties they may encounter. Barnes et al. (2009) determined that the greatest obstacle teachers reported in dealing with psychosocial difficulties, including suicidal behaviour, was the lack of parental involvement and nurturance or conversely, overindulgence and overprotection on the part of the parent. In their research "poor parenting as well as a lack of guidance from parents was found to be one of the attributing factors in learners' psychosocial problems" (Barnes et al., 2009, p. 48). A lack of family time and involvement in the lives of the learners was also reported to contribute to the difficulties the learners experience and therefore increased stress.

Kirkcaldy et al., (2004) in their research on suicidal ideation and young adolescents determined "small or non-existent effects of age" on suicidal ideation and self-destructive behaviour (p. 313). From their research it seems that an adolescent's age does not impact the individual's vulnerability to suicidal ideation and does not affect the likelihood of engaging in suicidal behaviours. It appears that it is the stage of development rather than the individual's age that impacts levels of suicidal behaviour.

Fatal suicide behaviour

In South Africa

"Patterns of suicide in South Africa appear to resemble those in most other countries that have published epidemiological suicide data" (Wassenaar, Pillay, Descoins, Goltman & Naidoo, 2000, in Pillay, Wassenaar, & Kramers, 2004). Burrows and Laflamme (2005) conducted research assessing suicide mortality in the city of Tshwane metropolitan municipality, South Africa. The findings indicate that the rate of suicide mortality varies across social groups with males having a higher rate of suicide mortality than females, a finding that is typical of other studies done in South Africa and globally (Burrows & Laflamme, 2005; Wassenaar, Pillay, Descoins, Goltman & Naidoo, 2000). The results also found that White people had higher suicide mortality rates than Black people, save for Black men who "exceed the rate for White females in all except the 35–44 and 45–55 year age groups" (Burrows & Laflamme, 2005, p. 599). This research also echoes findings from other South African research that there is a great discrepancy between the races in South Africa with regard to fatal suicide behaviour (Burrows & Laflamme, 2005) and from research

worldwide that indicates that "younger age groups are influenced more strongly than older groups by contextual factors" (Burrows & Laflamme, 2005, p. 600).

Other research conducted in South Africa indicated that among populations of White and Asian adolescents in the 15–19 year old age groups, suicide is the third leading cause of death, with 11.4%, per 100 000 of all deaths in this age group in the white population being ascribed to suicide and 12.5% being attributed to suicide in the Asian adolescent group (Flisher, Joubert & Yach, 1992; Flisher & Parry, 1994; Flisher, 1999 in Mashego & Madu, 2009, p. 490). A study conducted in the Cape Peninsula found that, in a comparison between those students attending school and those that had dropped out, the dropouts had lower prevalence rates for suicide than their school going counterparts (Flisher, Ziervogel, Chalton, Leger & Robertson, 1993 in Mashego & Madu, 2009).

More recent information about suicide mortality rates was found on the National Injury Mortality Surveillance System (NIMSS). NIMSS is a system that began in 1999 and "produces information on non-natural deaths from 37 mortuaries in six provinces" in South Africa (Seedat, 2007). The latest findings from NIMSS cited in the Medical Research Council November 2008 report reflect information gathered in 2007. It is reported that nearly two-thirds of all suicide victims were aged between 20 and 39 years. There were 4.6 male suicides for every female suicide, reiterating the findings made by Burrows and Laflamme (2005). "The major external methods of suicide among males were hanging (62%) and firearms (15%), while among females it was poisoning (38%) and hanging (36%). Most suicides occurred in private homes" (Medical Research Council & University of South Africa, 2008). Suicide "accounts for up to 1.2 per cent of all deaths of children aged 14 years and younger. Among adolescents aged 15 to 19 years, the suicide mortality rate is significantly higher" (Flisher, Joubert & Yach, 2002; Flisher, 1999 in Madu & Matla, 2003, p. 127). The Cape Peninsula study by Flisher et al. (1992) "show[ed] that students who were still attending school had higher prevalence rates for suicide than those who were not" (Madu & Matla, 2003, p. 127).

In adolescents

In the United States of America it is reported that "suicide is the third leading cause of death among adolescents, accounting for a greater number of deaths than the next seven leading causes of death combined for 15- to 24-year-olds" (Centres for Disease Control and

Prevention [CDC], 2006a in (Goldston et al., 2008, p. 14). The National Institutes of Mental Health (NIMH, 2004) echoed this report. In 2001 there were "approximately 9.9 completed suicides per 100,000 adolescents in the 15- to 24-year-olds age group…and 1.3 per 100.000 children in the 10- to 14-year-old age group" (Debski, Spadafore, Jacob, Poole & Hixson, 2007, p. 157). These statistics illustrate the need for research in the area of adolescent suicidal behaviour. Such a significant jump between age groups seems to indicate that as stress increases (developmental, environmental, psychosocial etc.), the adolescent is less likely to be able to cope with the stress and therefore uses maladaptive strategies to alleviate the stress. Firestone and Seiden (1990b) hypothesise that variables such as "low self-esteem, substance abuse, hopelessness, isolation, and withdrawal from favoured activities and relationships" appear to be significantly related to the increased fatal suicidal behaviour rate in adolescence (1990b, p. 121).

Theoretical background

Emile Durkheim, a sociologist, was one of the first contributors to the "study of the social and cultural influences on suicide" (Sadock & Sadock, 2007). Durkheim believed that when society as a whole begins to break down and when values that were previously respected in groups are destroyed, the incidence of suicide increases. Durkheim examined the individual's relationship to society and stated that different types of suicide could result from an individual's relationship with society. He focussed "not on specific events that precipitated suicide, but on the mindsets that certain societal conditions can create that increase risk for suicide. He proposed that there were three types of suicide" (Nolen-Hoeksema, 2001, p. 309). He differentiated among egoistic suicide, anomic suicide and altruistic suicide. Egoistic suicide "is committed by people who feel alienated from others, empty of social contacts, alone in an unsupportive world" (Nolen-Hoeksema, 2001, p. 309). Anomic suicide "is committed by people who experience severe disorientation because of some large change to their relationships to society [and] altruistic suicide is committed by people who believe that taking their own lives will benefit society in some way" (Nolen-Hoeksema, 2001, p. 309). It follows then that a correlate of suicidal behaviour may be loneliness. People who feel more alone are unable to deal with stress effectively, are more anxious and social interactions – having someone to depend on – could help prevent suicidal behaviour as the person feels less anxiety. Durkheim's theory is still referred to today, however there are other psychological theories about suicide that need to be mentioned.

Freud believed that suicide was an act where an individual's repressed desire to kill and repressed anger towards another were the precipitators of suicide (Nolen-Hoeksema, 2001; Sadock & Sadock, 2007). Contemporary suicidologists are not convinced that a "specific psychodynamic or personality structure is associated with suicide" (Sadock & Sadock, 2007, p. 900). They believe that it is possible to learn from the fantasies of suicidal patients, fantasies which "often include wishes for revenge, power, control, or punishment; atonement, sacrifice, or restitution; escape or sleep; rescue, rebirth, reunion with the dead; or a new life" (Sadock & Sadock, 2007, p. 900). Biological factors as well as genetic factors have also been associated with suicidal behaviour (Sadock & Sadock, 2007).

Theories of non-fatal suicide behaviour

In an examination of non-fatal suicide behaviour among patients in a government general hospital in the KwaZulu-Natal region of South Africa, Pillay and Wassenaar (1997a) determined that a number of factors seem to contribute to such behaviour. Notably levels of family disturbance as well as feelings of hopelessness and psychiatric disturbances such as depressive symptoms were seen to be associated with non-fatal suicide behaviour.

In families, rigidity and a feeling of being unable to express feelings to or discuss problems with parents or caregivers play a role in the adolescent or individual feeling trapped or engulfed by the family. Pillay and Wassenaar (1997a) suggest that individuals who have engaged in suicide behaviour "are reared in a family environment of rigid problem-solving behaviour with patriarchal leadership" causing the adolescent to have a sense of being "over-controlled" (1997a, p. 229).

At a time of great developmental change the adolescent is grappling with resolving many crises, emotionally and physically, and needs support and understanding from their parents and family. Pillay and Wassenaar (1997a) suggest that families that are intolerant of change illustrate "low adaptability" (p. 229) and family dysfunction. The adolescent finds it difficult to engage with the family, on the topic of change for example, and in a desperate attempt to be heard, resorts to a maladaptive coping strategy to resolve the conflict in a way that will get the family to notice their distress. The inability of the adolescent to resolve the conflict as well as the feeling of hopelessness that is coupled with this has been reported as a trigger for suicidal behaviour (Goldman & Beardslee, 1999; Kirkcaldy, Eysenck & Siefen, 2004; Pillay & Schlebusch, 1987; Pillay, Wassenaar & Kramers, 2001).

The adolescent's inherent desire to individuate is impeded by the family situation. He feels unable to extricate himself from the family, he feels overprotected and does not feel he has permission to make his own decisions. A family such as this is unable to aid individuation and it has been suggested, "that the adolescent's failure to disengage is due partly to difficulty resolving an 'identity crisis' as well as to the family's failure to facilitate disengagement" (Pillay & Wassenaar, 1997a, p. 228).

This is not the same as family closeness. Adolescents who feel they have a close connection with their parents seem to have lower frequencies of engaging in suicidal behaviour. Liu (2005) also reports that the influence of parent-youth relations on adolescents' suicidal gestures is gender specific. She found that in the majority of cases she examined those girls who felt they had a close relationship with their fathers had higher self-esteem, performed better at school and were less likely to engage in self-harming behaviour. It seems that a similar result was found with boys and their relationship with their mothers except for the period of mid-adolescence when she reports that boys tend to distance themselves from their mothers. She purports that this is due to the societal push for adolescent boys to fit into stereotypical gender roles and that as the boys mature and reach late adolescence there is less pressure to conform in this way and they then re-engage with their mothers (Liu, 2005). The difference between closeness and enmeshment is essential. Closeness within families, especially between parents and children, is seen as a protective factor for suicidal behaviour. However, enmeshment has been found to increase the risk of suicidal behaviour.

Pillay and Wassenaar (1997a) reflect on the impact families that are socially insulated, who have little interaction with others outside the family, as well as those family environments that are "hostile and rejecting" (1997a, p. 228) have on the young person. The suicidal behaviour of a young person may be an "effort to escape the unbearable family situation" (1997a, p. 228).

It has been reported that certain psychiatric disturbances are prominent in those individuals who engage in suicide behaviour, namely depression, conduct disorder and adjustment disorder (Pillay & Wassenaar, 1997a).

Theories of suicide in adolescence

In order to define what suicidal behaviour is in children and adolescents, it is possible to look within a "schema of developmental psychopathology [which integrates] the interplay between normal and atypical development, an interest in diverse domains of functioning and an emphasis on the utilisation of a developmental framework for adaptation across the life course" (Pfeffer, in King & Apter, 2003, p. 211).

Lester (2000) cites a variety of research examining correlates with adolescent suicide in an attempt to understand better why people kill themselves, or attempt to or think about it. Factors such as previous attempts, personality disorders, substance disorder and social class were reported to be possible predictors of completed suicide. Family and school problems were also reported to be associated with completed suicide as were depression, avoidant behaviour and conduct problems.

Friction within the family and psychiatric disturbance were reported to correlate for non-fatal suicide behaviour. Family circumstances such as unemployed fathers and divorced parents or broken families seemed to increase the possibility that the individual would engage in suicide behaviour. Affective disorders, particularly in girls, and those individuals at the stage of development concerned with conforming were more likely to engage in non-fatal suicide behaviour (Lester, 2000).

Though suicide behaviour and various variables have been researched extensively there is little evidence "of the consistency with which each variable correlates with suicidality" (Lester, 2000, p. 71).

Gender and Suicide

It has been reported that boys and girls differ in suicidal behaviour. Within suicide research a gender paradox has been noted in that globally, with some exceptions, completed suicide is more common among males, yet suicidal ideation and attempts are more common among females (CDC, 2000; Garrison et al., 1993; Gould et al., 1998; Lewinsohn et al., 1996 in King & Apter, 2003, p.14). This trend has also been reported in South Africa (Schlebusch, 2005). Canetto (1998) determined that the gender paradox in suicidal behaviour is not an illusion but a reality. She reports that suicidal behaviour and gender differences may be a

cultural phenomenon where beliefs about the genders differ and then impact suicidal behaviour.

Canetto (1998) investigated the possible reasons this gender paradox exists by examining the work of Moscicki (1994), who proposed four possible explanations for this difference. These are the "lethality explanation", the "recall bias theory", "the differential rates of depression and alcohol abuse", and "gender differences in socialisation" (Canetto, 1998, p. 8).

The "lethality explanation" focuses on the differences in method used by the individual and suggests that this differs by gender. A study completed in Limpopo province in South Africa found that a larger number of males than females in the sample who participated in non-fatal suicide behaviour needed professional medical attention after the event. This may serve as evidence "that males tend[] to employ more lethal methods in their attempts to commit suicide" (Madu & Matla, 2003, p. 130). Difference in choice of method in this study also seems to indicate that men choose methods that are deemed more lethal, reiterating the suggestion that men are more likely to engage in fatal suicidal behaviour than women. They intend to kill themselves rather than their actions being a cry for help. This finding is supported by similar findings in other studies (Beck, Beck and Kovacs, 1975; Kimmel & Weiner, 1995 in Madu & Matla, 2003; Kirkcaldy, Eysenck & Siefen, 2004; Pillay, 1988).

The "recall bias theory" purports that women are better at reporting about their health than men, so suicidal ideation and other non-fatal suicidal behaviour is more often recorded with women than with men where prevalence of this behaviour may be underreported. Billie-Brahe (2001) refers to this explanation in her research on adolescents in a study focused on adolescent boys and girls between the ages of 15- and 19-years old. It seems the world over the gender paradox is evident. She reports that girls were far more open to speaking about the reason for their suicidal behaviour, usually trouble with their partner, than their male counterparts who spoke more generally about having too many problems that they just needed to get away from.

> Significantly more girls than boys had seriously considered attempting suicide and significantly more had made one or more suicide attempts. At the same time, more girls than boys thought that one should always try and prevent suicide, while the boys argued that suicide was a human right.
> (Bille-Brahe, 2001 in van Heeringen, 2001, p. 205).

Much research suggests that "completed suicides are higher among males than females, whereas attempted suicides and threats to commit suicide are higher among females" (Goldman & Beardslee, 1999; Zimmerman & Asnis, 1995 in Madu & Matla, 2003, p. 127). The National Centre for Injury Prevention and Control [NCIPC] (2003) reports that "males are four times more likely to commit suicide than females, whereas females are more likely to attempt suicide" (in Debski et al., 2007, p. 158). A possible reason for this difference is reflected in the difference between masculinity and femininity. Women are more likely to actively seek help from their social network or environment than men are. Men are more prone to keeping their feelings to themselves rather than expressing them and seeking overt ways to deal with conflict (Madu & Matla, 2003).

The third explanation for the gender paradox is that often women seek help for depression, a known precursor to fatal suicide, and treatment of this may be the reason that the suicide mortality rate in women is lower than in men. On the other hand men, rather than seek treatment for depression, would instead self-medicate with the use of alcohol, a depressant, a behaviour that is linked to "suicide mortality when comorbid with depression and interpersonal loss" (Canetto, 1998, p. 8). Kirkcaldy et al.'s (2004) study found further information to support the idea that females carry out self-injurious behaviour more often and have higher levels of suicidal ideation than their male counterparts. They report that the best predictors of suicidal ideation and self-harming behaviour are levels of anxiety and levels of depression experienced by the individual. It was also found that predictors of whether an individual will experience suicidal ideation were different for males and females. "Males with suicidal ideation are more inclined to display stronger roots in childhood, low self-esteem and hopelessness as well as thoughts of self-harm. [With regard to] females, self-esteem had a more direct effect on subsequent suicidal ideation" than any other predictor (McGee, Williams & Nada-Raja, 2001 in Kirkcaldy, Eysenck & Siefen, 2004, p. 305). The difference in predicting suicidal ideation between males and females has also been reported by King, Ruchkin and Schwab-Stone (2003). They believe that it is important to note that "risk factors and prognostic implications associated with adolescent suicidal behaviour differ with gender. … [their findings illustrate that] for boys, completed suicide was associated with major depression, substance abuse, and/or antisocial behaviour. In contrast, for girls, major depression and antisocial behaviour, but not substance abuse were associated with increased risk of suicide completion" (King, Ruchkin & Schwab-Stone, 2003 in King & Apter, 2003, p.

48). It was also found that boys that engage in non-fatal suicide behaviour were more likely to complete suicide at a later stage than girls who participate in non-fatal suicide behaviour.

Finally, differences in socialisation of boys and girls may account for the gender paradox in suicide: associations with femininity and non-fatal suicidal behaviour and masculinity and fatal suicidal behaviour may account for the difference. Madu and Matla (2003) report that actual suicide is seen by society as more 'masculine' than attempted suicide. "This, therefore, suggests that males are much more likely than females to engage in suicidal behaviour only when they intend to complete the act. Attempted suicide is seen as 'feminine', which makes it more likely among females" (2003, p. 127). In terms of suicidal ideation Kirkcaldy, Eysenck and Siefen (2004) report that it is "significantly more endorsed among female than male adolescents" saying that approximately twice as many girls think about being dead or contemplate suicide than boys (2004, p.301). Differences in attitudes towards and meanings of suicidal behaviour between the genders are evident in Billie-Brahe's study (2001). A reason posited for this difference is reflected in the age-old idea that men shouldn't cry. It is believed that girls are more emotional, and are therefore encouraged by society to express their emotions and actively seek help, so when conflict or distress arises they are more likely to attempt suicide as a cry for help. Boys on the other hand are socialised into hiding their emotions, presenting an image of being constantly strong and invincible. For that reason they may see suicide attempts as a failure of a task, a weakness, therefore choosing ways of attempting to commit suicide that are usually fool-proof, ensuring they do not "fail" at the task, and thus maintaining the illusion of what a real man should be (Bille-Brahe, 2001 in van Heeringen, 2001).

Canetto and Lester (1998) report that men and women who are deemed suicidal are assumed to be opposite in all aspects of suicidal behaviour.

> Women are said to 'attempt,' and men to be 'successful' at suicide. On the one hand, suicidal behaviour in women is viewed as an ambivalent, emotional, weak act precipitated by private relationship problems. Suicidal behaviour in men, on the other hand, is construed as a decisive, calculated, strong response to impersonal adversities. (Canetto & Lester, 1998, p. 163)

The gender paradox seems to be a phenomenon that needs careful consideration and attention. It also appears that cultural environments must be considered when exploring suicidal behaviour with adolescents and other populations.

Race

In a South African context it seems that there is some discrepancy in the research done on suicidal behaviour and race. The one common factor is that Asian or Indian South Africans seem to be more likely to partake in self-harming behaviour across all age groups than any other race group (Vawda, 2005). It seems that the frequency that Black youth are engaging in suicidal behaviour is increasing, as Vawda (2005) argues, and as evident in Madu and Matla's (2003) paper. Suicidal behaviour in the adolescent population of the White race group is more common than in other race groups other than in Indian South African groups. Flisher et al. (1992) and Flisher (1999) in Madu & Matla (2003) indicate that "among white and Asian populations in South Africa, suicide is the third leading cause of death, constituting 11.4% and 12.5% (rates per 100,000), respectively of all deaths in the 15 to 19 years age group" (2003, p. 127). The frequency of suicide death in other race groups is reported to be lower than these rates.

Pillay and Wassenaar (1997a) report that the frequency of suicide behaviour in Indian adolescents is noteworthy and they suggest that over-involvement of the family of the adolescent in the adolescent's life has some bearing on the reason why suicidal behaviour occurs in the first place. They suggest that suicide behaviour in patriarchal families could be the "adolescent's call for disengagement in a family which is unable to facilitate individuation" (Pillay & Wassenaar, 1997a, p. 230). Subjects in this study were reported to clearly show their discontent for their family structure, which they felt, did not yield to their striving for autonomy (Pillay & Wassenaar, 1997a). Vawda maintains that "Indian adolescents' constant exposure to less restricted Western lifestyles generated considerable cross generational conflict as parents/elders were perceived as authoritarian, intolerant and over-controlling if they did not allow adolescents to pursue Western lifestyles" (Vawda, 2005 in Malhotra, 2005, p. 98-99). Vawda's findings echo Wassenaar's (1987) report. Wassenaar (1987) indicates that the shift to the less traditional view of life and behaviour and the shift in focus to a more nuclear family rather than an extended one in combination with the stress the adolescent is already feeling at this developmental stage all seem to be associated with suicidal behaviour, specifically in Indian adolescents. Vawda reports that similar behaviour is

now being seen in Black South African youth, saying that this group is engaging in behaviour "very similar to that which South Africans of Indian origin have been engaging in and that in terms of suicidal behaviour Blacks are no different to Indians" (Vawda, 2005, in Malhotra, 2005, p. 98). Vawda believes that the results of her study indicate that "Black youths have similar perceptions of their families" to Indian youths. She notes similarities in the two population groups and questions whether this shift could account for the increase in suicidal behaviour amongst Black youth (Vawda, 2005 in Malhotra, 2005, p. 99).

Research into suicidal ideation in the South African Police Force found that "the black and Indian groups (compared with whites and coloureds) showed higher than expected frequencies in the high suicide ideation group" (Pienaar & Rothman, 2005, p. 65). This result may be able to stand alone but one needs to question whether this finding is true due to race or because of a skewed racial intake into the police force in general. The police force seems to comprise a greater proportion of black and Indian officers than other race groups, which could account for a possible skewed assessment if this factor has not been taken into consideration.

Correlates

Depression

Suicidal ideation does not exist independent of other factors. In an examination of suicidal ideation it is important to consider the possible factors that could be said to influence whether an individual engages in suicidal ideation or not. "Suicide ideation and attempts are correlated with major depression and anxiety disorders, conduct problems (including a history of police contact), neuroticism, cigarette smoking and marijuana use, novelty seeking, onset of sexual activity, and low self-esteem" (Fergusson & Lynskey, 1995; Fergusson, Woodward & Horwood, 2000; Fergusson, Beautrais & Horwood, 2003; Fergusson, Horwood, Rider & Beautris, 2005; King, Schwab-Stone, Flischer, Greenwald, Kramer, Goodman et al., 2001 in Debski et al., 2007, p. 158).

Depression is reported to affect 20.4 per cent of the population in any given year in the United States of America, and nearly twice as many females as males suffer from depression. Research indicates that the onset of depression is earlier than it has been in the past (Knox & Lichtenberg, 2005). However, the problem with earlier onset depression is that it is often

undetected in children and adolescents as signs of depression in these age groups are often deemed normal behaviour, such as mood swings typical of "teenage" behaviour. This difficulty in diagnosis and the reluctance of the professionals to "label" a child or adolescent, in an attempt to avoid possible stigmatisation, often means that young people go undiagnosed and therefore untreated. This occurs despite evidence that "early diagnosis and treatment are crucial to healthy emotional, social, and behavioural development" (Knox and Lichtenberg, 2005).

A diagnosis of depression does not mean that the individual will commit suicide, rather depression increases the risk of suicidal behaviour, non-fatal or fatal. This is especially true of adolescent boys specifically those diagnosed with conduct disorders or who are using or abusing substances. Knox and Lichtenberg (2005) report that "adolescents with major depressive disorder are seven times as likely to commit suicide as young adults in their twenties". This finding was based on a study with youth from the United States of America.

Amongst all the possible correlates with suicidal ideation, "depressive disorders have been found to be the strongest correlate of suicidal tendencies among youth, accounting for one-third to one-half of serious suicide attempts" (Fergusson et al., 2003 in Debski et al., 2007, p. 158). Bhatia, Aggarwal and Aggarwal (2000) in a study on suicide in India, report that "the severity of depression and the degree of hopelessness" (p. 161) was a marker of long-term suicidal risk, a finding that has been reported by a number of other authors (Linn & Lester, 1996 in Bhatia, Aggarwal & Aggarwal, 2000; Shukla, Varma & Mishra 1990; Unni & Mani, 1996). In psychiatric diagnoses associated with suicide risk, depression is seemingly the most common. Ledgerwood (2008) found that nearly 20 per cent of those individuals diagnosed with major depressive disorder and who are left untreated will eventually die at their own hand. He also underlines the relationship between depression and hopelessness and indicates that individuals who experience this are at a higher risk of suicide.

Mazza (2005) found that hopelessness and depression play a particularly important role regarding suicidal behaviour in adolescents. He reports that the psychopathology profile of adolescents who have participated in fatal and non-fatal suicidal behaviour is very similar, with depression being the most common psychopathology linked to suicidal behaviour, in this demographic as well as others.

Jeshmaridian (2008), Mazza (2005) and Fried (2004) suggest that attention should be paid to risks factors for depression. Such risk factors include anxiety, stress, illness and to a large extent the individual's social and family relationships. Without support from peers and guardians adolescents may feel isolated and disconnected. Mazza states, "social support by peers and parents acts as a protective factor and reduces the likelihood of adolescents engaging in suicidal behaviour" (2005).

When confronted with a stressful life event or a relational conflict, physical and psychological well-being is moderated by the coping style implemented by the individual. Therefore the relationship between coping styles and depression is significant (Endler & Parker, 1990). A review of relevant studies by Endler and Parker (1990) indicated that "depression is positively related to emotion-oriented coping" and that there is a "negative relationship between depression and task-orientated coping" (Tremblay & King, 1994. p. 3). This result was found to be true of a Canadian sample: whether a similar result is found for a South African adolescent sample is unknown.

Helplessness and hopelessness

"The level of hopelessness is a critical indicator of suicide intent. Hopelessness refers to pessimism or negative thinking about the future. Individuals who are unable to see a positive outcome to their situation are considered to be at higher risk than those who believe that their problems can be resolved" (Pillay & Wassenaar, 2007, p. 216). Kazdin, French, Unis, Esveldt-Dawson and Sherick (1983) in Berk (1999), found that children who participated in suicidal behaviour also reportedly felt more depressed and hopeless than those children who reported suicidal ideation and had no history of suicidal behaviour. (Berk, 1999). McLaughlin, Miller, & Warwick (1996) report that feeling hopeless and pessimistic about the future are "cognitive factors that may put an adolescent at risk for suicide" (in Debski et al, 2007, pp.158-159).

Williams and Pollock (2000) reiterate the finding that hopelessness, or a pessimistic view of the world, is an important factor to take into account in examining suicidal behaviour (in Hawton, 2001). Hopelessness is seen to be the factor that links depression to suicidal behaviour in individuals who deliberately self harm. Hopelessness is understood as a deficient expectation of positive events rather than expecting a plethora of negative ones. It seems that individuals who experience a sense of hopelessness experience low self-esteem,

something that has been found to increase the risk of suicide ideation in adolescents (Hawton, 2001). When faced with difficult situations it does not seem that these individuals have the resources to resolve the distress and then they tend to fall into a feeling of hopelessness. However hopelessness has not been determined to be an independent predictor of suicidal behaviour, rather it is seen as an aspect of a depressed mood and as already noted depression is a possible predictor of suicidal behaviour (Gould, Shaffer & Greenberg, 2003 in King and Apter, 2003). It seems that as feelings of hopelessness about life increase, the more depressed an individual will feel and therefore the more likely they will be to engage in suicide behaviour. "Hopelessness seems to be a catalyst in the development of suicidal ideation and behaviour" (Pillay & Wassenaar, 1997a, p. 228). Interestingly, measures of hopelessness have been found to be more successful in predicting suicide risk and future suicides than depression (Pillay and Wassenaar, 1997a).

Nock (2005) found that several elements were implicated in determining whether an individual was a high risk for suicidal behaviour. These included evidence of psychopathology such as the presence of a mood disorder particularly with symptoms of hopelessness as well as difficulties with problem solving, previous self-destructive behaviour and past suicide attempts.

The reason for the increase in suicidal behaviour over the past decades does not seem clear though many researchers have attempted to investigate the phenomenon. Some research purports that the rise in this behaviour in the adolescent population is due to the increased amount of stress that teenagers experience. Such things as substance use and abuse, changes in the family constitution as well as academic, peer and social pressure all add to the increased feelings of stress adolescents report to be feeling. Being unable to cope with these pressures often leads the adolescent to feel depressed and be engulfed with an overriding sense of hopelessness, which seemingly can only be relieved by ending their life (Jeshmaridian, 2008). The adolescent who is keenly fighting for independence in their attempt to find a place for themselves in the world may begin to feel helpless when met with obstacles to this independence. Goldman and Beardslee (1999) state that a feeling of helplessness, so familiar to a younger child, may in fact be tormenting for the adolescent who is striving for autonomy. The adolescent's cognitive ability is more fully developed than that of a younger child and this "allows them to envision a hopeless future and contemplate their own helplessness in relation to their current situation and future possibilities" (Goldman &

Beardslee in Jacobs, 1999, p. 420). However, they still have not yet developed their coping mechanisms and sense of self. Instability in this area means the adolescent is not able to resolve the conflicts he is faced with effectively making him feel disheartened, adding to his feeling of hopelessness (Kirkcaldy et al., 2004; Goldman & Beardslee, 1999).

Loneliness

Forming and maintaining relationships, specifically social relationships creates great happiness in individuals and "the support of others is a way of coping with stress" (Argyle, 1999, p. 81). Coping skills influence the quality of interpersonal relationships regardless of the context the relationship occurs in. In the event that the coping skills implemented do not aid in maintaining relationships through the troughs and peaks that all relationships navigate, the relationship may disintegrate, resulting in a sense of loneliness. "Loneliness is a cost of not having relationships and is a major source of unhappiness and depression" (Argyle, 1999, p. 84). Loneliness can be separated into two different types, emotional (absence of a close attachment) and social loneliness (absence of a network of friends).

Culture and acculturation

Studies have shown "inordinately high levels of stress associated with suicidal behaviour in many South African communities" and that many young Black South Africans are negatively affected by this. (Schlebusch, 1998a, 2000a, b, c, 2004; Schlebusch & Bosch, 2000 in Schlebusch 2005). Schlebusch (2005) writes "chronic and acute stress are critical co-morbid aetiological considerations in suicidal behaviour" (Pretorius & Roos, 1995; Schlebusch, 1995b). This is an important point in the present study. Whether adolescents are experiencing stress and, if so, determining what these stressors are as well as how they are coping with this stress could help point to links with suicidal behaviour and possibly aid in the implementation of a prevention scheme. It has been noted that stress, precipitated by a conflict in cultural roles, is a problem faced by "young people from traditional backgrounds in a multicultural South African society who have to cope with new roles and a more Western-orientated culture" (Schlebusch, 2005). This phenomenon is referred to as acculturation.

Acculturation "involves contact that takes place at both group and individual levels leading to changes which for the individual entail affective, behavioural and cognitive changes… and subsequent long-term modification of psychological and socio-cultural adaptation" (Sam,

2006 in Sam & Berry, 2006 p. 21). Acculturation studies reporting on "suicide in indigenous people indicate that minority status, loss of cultural or ethnic identity and a rapid modernisation process [contributes to] high and increasing rates of suicide among adolescents and young people" (Kvernmo, 2006 in Sam & Berry, 2006 p. 242-3).

In the 1980s Wassenaar (1987) noted an increase in what was then called parasuicide in the South African Indian population. Parasuicide was defined as 'a nonfatal act in which an individual wilfully causes self-injury or ingests either medicines in excess of recognised therapeutic doses or substances not intended for human consumption' (Pillay & Wassenaar, 1991, p. 363). The increase was reported to be associated with cultural transition from traditional living environments and values to more western ways of life and beliefs. This process was referred to as deculturation. Pillay and Schlebusch (1987) report similarly saying, "deviations from accepted cultural norms appear to be notable precipitants of parasuicide" (1987, p. 107). The perceived, less restricting ways of the Western world draw the Indian adolescents away from their traditional backgrounds often with the result of conflict with their parents who they perceive to be authoritarian. "The resultant stress appears to be closely associated with parasuicide." (Pillay & Schlebusch, 1987, p. 109).

Vawda's research on suicidal behaviour among Black South African children found that acculturation is a possible explanation for the greater prevalence of suicidal behaviour among Black youth. "The adoption of western lifestyles and culture and the stresses associated with cultural transition and acculturation to First World forces all affect youngsters from traditional backgrounds in multicultural South Africa and must be considered important factors in the genesis of suicidal behaviour" (Vawda, 2005 in Malhotra 2005, p. 97).

In an investigation into suicidal behaviour of whatever nature awareness that there "may be culture-specific patterns in the triggers or precipitants of suicidal behaviour" is necessary (Goldston et al., 2008, p. 16). People from different cultures will experience stress in ways that differ from people of other cultures and those things that cause stress in one culture may not necessarily cause stress in another. Though acculturation has been cited as a cause of stress, it cannot be said for all people of all cultures that acculturative stress will lead to self-harming behaviours. Research with a sample of adolescents from a Latino population found that "acculturative stress…is associated with higher levels of thoughts about suicide" (Hovey

& King, 1996 in Goldston et al., 2008, p. 16), though this may not necessarily be the case for all populations.

In a discussion on cultural factors it should also be noted that reactions to and beliefs about suicide are not standard. "Individuals in various cultural contexts may view and understand, and hence react to, suicidal behaviours in different ways" (Goldston et al., 2008, p. 16). Research on this topic is difficult if for no other reason than there is no stock standard definition of what constitutes culture, and without a standard definition research is not necessarily comparable. Culture and acculturation is an important aspect in the discussion of suicidal behaviour and coping strategies and seems to play a role. However, it is beyond the scope of this study to investigate the impact cultural change has on adolescents, their feelings of stress associated with it and how they cope with it.

Coping and suicidal ideation

The manner in which an individual approaches a conflict situation and the manner in which an individual manages stress have been seen to be predictors of suicide behaviour. Individuals who are able to manage stress in a positive, adaptive manner engage in suicidal behaviour less frequently than those who cope with stress in a maladaptive manner. "Many researchers have identified cognitive and coping style factors associated with suicidal behaviours. However, most of this research has been done with suicide attempters rather than contemplators, and generalisations are uncertain" (Berk, 1999, p. 414). Pillay and Wassenaar explain that "suicidal acts, whether fatal or non-fatal, are indications of the severe levels of psychosocial distress being experienced. It is important to note that the lethality of the suicidal behaviour is not always a good indicator of the adolescent's level of psychosocial distress" (2007, p. 217). Vawda reiterates the idea that ineffective problem solving skills and poor coping strategies can predict suicidal behaviour. Findings from Vawda's study "indicate that suicidal behaviour was an unpremeditated, impulsive act used by individuals who did not have psychiatric morbidity in the face of a predominantly interpersonal crisis with significant others in their lives. As such it is an inappropriate problem solving skill to deal with distress" (Vawda, 2005 in Malhotra, 2005, p. 97).

Identifying a relationship between coping and suicidal ideation could help "guide schools to provide an appropriate setting in which coping skills may be taught" (Forman, 1993, p. xi).

Forman states “the development of coping skills is directly related to the basic mission of the school [], which is to prepare youth to function effectively in society” (1993, xi). She also comments that coping skills can reduce developmental problems that adolescents experience (Forman, 1993). Forman cites data linking “psychological and behavioural problems with life stress”, specifically suicidal behaviour. (1993, p. 11). Vawda suggests that “schools (through counsellors/teachers) need to take a more active role in the well being of their pupils” (Vawda, 2005 in Malhotra, 2005, p. 99) and that in an attempt to decrease the prevalence of suicidal behaviour, life skills and coping skills that help individuals to deal with perceived stressful events that occur, particularly in the school environment, need to be taught. (Vawda, 2005 in Malhotra, 2005, p. 99).

Local research in this area has been done (Meehan, 2007; Senatore, 2006). Schlebusch writes that, “on average 9.5 per cent of non-natural deaths in young people in South Africa are because of suicide”, a rate which is on a par with the adult suicide rate (Schlebusch, 2005, p. 55). It has been reported that local data in South Africa “suggest that the rate of fatal suicide for males is about 12 per 100 000 and for females, 2 per 100 000, with relatively minor differences between racial or cultural groups. The gender ratio of about 4.5 males to one female also resembles international averages” (Pillay et al., 2004, p. 350-351). It is difficult to get accurate, reliable statistics on non-fatal suicidal behaviour in South Africa because of difficulties completing research in an area as highly sensitive as suicidal behaviour and because the prevalence and incidence of suicidal behaviour are underreported (Schlebusch, 2005).

Studies at the University of the Witwatersrand examined the relationship between suicidal ideation and coping strategies and found similar results. Both studies looked at the influence gender had on coping strategies used by adolescents and levels of suicidal ideation reported by these adolescents. However the formulation of the studies differed. Meehan (2007) examined the role of gender and coping strategies on suicidal ideation with a sample of grade 11 learners, boys and girls from the same school. Senatore (2006) examined adolescent coping strategies in a co-educational school following a suicide prevention programme. Her sample was also grade 11 learners, boys and girls.

Meehan found that females scored higher on both the positive and negative scale of suicidal ideation, indicating that females have a more positive outlook on life. She also found that a

variety of coping strategies were used by adolescents in South Africa but that most common, in boys and in girls, was the use of internal coping strategies with withdrawal as a coping strategy being used the least often within her sample (Meehan, 2004).

Senatore found that there was no significant difference in the positive ideation scale for boys and girls. There was significant difference on the negative ideation scale, where girls scored higher than boys (Senatore, 2006). She also found that there was no significant difference in coping styles between boys and girls and that both boys and girls scored highest on internal coping, refuting beliefs that girls scored highest on active coping, a more functional type of coping and boys usually score highest on withdrawal scales, a more dysfunctional coping style (Senatore, 2006).

The aim of this study therefore is to examine the relationship between coping strategies and suicidal ideation in a sample of adolescent males. The study also aims to determine whether, in this sample, there is a relationship between suicidal ideation, coping strategies and certain demographic characteristics: race, grade and age.

Chapter 3

Research Questions

1.) Is there a relationship between coping strategies and suicidal ideation in a South African sample of adolescent males?
2.) Is there a relationship between coping strategies and demographic characteristics?
3.) Is there a relationship between suicidality and demographic characteristics?

Chapter 4

Methodology

Design

This is a quantitative study. Strengths of this type of research include the potential generalisability of the results and the objectivity of the data, both of which aid to facilitate broad comparisons. However, these are ideals. Though a loss of depth and understanding is said to occur in using quantitative techniques as opposed to qualitative techniques, in this research, thorough understanding is not the focus. The nature of the experience of the individual is not being examined, therefore a focus on measurable variables is acceptable (Terre Blanche, Durrheim & Painter, 2008).

Kerkhof and Arensman (2001) assert that it is difficult to assess suicidal ideation by use of anonymous questionnaires as it is not then possible to assess what the respondent means when they report urges or tendencies (in van Heeringen, 2001). The aim of the current study is to determine whether a relationship exists between coping strategies and suicidal ideation, rather than to determine whether suicidal behaviour can be predicted by examining suicidal ideation. Suicidal ideation is "ambivalent and fluid, and it may fluctuate. Therefore, it is a complicated matter to relate the intensity of suicidal ideation measured at any moment to eventual suicide" (Kerkhof & Arensman, 2001 in van Heeringen, 2001, p. 18) and therefore

does not have good predictive qualities for suicidal behaviour. The purpose of this study is not to ascertain whether one can make predictions based on suicidal ideation; rather it is to consider the coping strategies of an individual in relation to that individual's level of suicidal ideation, consequently it is feasible to use anonymous questionnaires.

Two different instruments were used in this study, one to examine the coping strategies and the other to look at the levels of suicidal ideation of the participants in the sample. The Suicide Ideation Questionnaire (SIQ) made use of a Likert type scale to determine the levels of suicidal ideation experienced by the participants. The Coping Across Situations Questionnaire (CASQ) (Seiffge-Krenke, 1995) asked participants for a retrospective analysis of how they believed they coped when a possible variety of stressful situations arose. Participants indicated yes or no with a tick for positive responses. This is described as an inventory approach that is helpful because approaches such as this "allow multidimensional descriptions of situation-specific coping thoughts and behaviours that people can self-report" (Stone et al., 1992 in Folkman & Moskowitz, 2004, p. 748). Suldo et al. report that "self-report surveys of frequently used coping behaviours provide an efficient means of collecting data on individuals' responses to stressors" (Suldo et al., 2008a, p. 961).

Hypotheses

In a sample of adolescent males:

1. Functional coping strategies will correlate negatively with low suicidal ideation
2. Maladaptive coping strategies will correlate positively with higher suicidal ideation
3. Demographic characteristics will impact coping strategies and suicidality

Sample

Non-probability purposive sampling was used to locate a sample for this study. Many difficulties were faced in securing a sample, these are discussed in chapter 7: limitations and difficulties. The sample consisted of 54 grade nine, ten, eleven and twelve male learners who had received parental consent and had given individual assent, as well as 11 grade twelve

pupils who were either 18 or 19 years old and therefore parental consent was not required for them to participate. Table 2 illustrates the distribution of the sample according to their grade. The total number of participants was 65 [8 grade 9 pupils (12.30%); 9 grade 10 pupils (13.84%); 14 grade 11 pupils (21.53%) and 34 grade 12 pupils (52.30%)].

Table 2

Distribution of sample by grade

	Grade 9	**Grade 10**	**Grade 11**	**Grade 12**
n	8	9	14	34
Percentage	12.3%	13.84%	21.53%	52.30%

Of the sample 69.2 per cent reportedly spoke English as their first language with the remaining 30.8 per cent speaking either Zulu or Afrikaans as their home language. This is illustrated in Table 3.

Table 3

Distribution of sample by language

	English	**Afrikaans**	**Zulu**	**Other**
n	45	2	18	0
Percentage	69.2%	3.1%	27.7%	0%

The distribution of the sample according to self-selected population group can be seen in Table 4. The majority of the sample fell into the White population group (44.61%). The lowest number of participants fell into the population groups Asian, (1.5%) and Coloured, (6.15%). The participants that classified themselves as either Indian or Black were similar in number, 20.05 per cent and 27.69 per cent respectively.

Table 4

Distribution of sample by population group

	Black	**White**	**Indian**	**Asian**	**Coloured**
n	18	29	13	1	4
Percentage	27.69%	44.61%	20.05%	1.50%	6.15%

The age of the participants ranged from 15 to 19 years old with the majority being 18 years old (49.23%), seen in Table 5. This was followed by those participants who were 16 years old (21.53%), then the 15 and 17 year olds both groups each forming 12.31 per cent of the whole and finally the minority of the participants were 19 years old (4.62%).

Table 5

Distribution of sample by age

	15 years	**16 years**	**17 years**	**18 years**	**19 years**
n	8	14	8	32	3
Percentage	12.31%	21.53%	12.31%	49.23%	4.62%

The intention at the beginning of the process was to obtain a sample of about 150 participants. Approximately 300 consent forms were distributed with positive responses obtained from only 54 parents or guardians. When undertaking research, probability sampling is the preferred method of sampling as results are more often generalisable to the greater population. However, probability sampling can be expensive and is often difficult to obtain. Purposive sampling depends on "availability and willingness to participate" as well as the belief that the selected sample is typical of the population from where it is selected (Terreblanche, Durrheim & Painter, 2008, p. 139).

Instruments

Two questionnaires, the *Coping Across Situations Questionnaire* (CASQ) (Seiffge-Krenke, 1995) and *About my Life: Suicide Ideation Questionnaire* (SIQ) (Reynolds, 1987) as well as a simple demographic questionnaire were used in this study.

The CASQ was "standardised on adolescents/young adults between the ages of 15 and 27 years" (Meehan, 2004, p. 55). The scale has been used on samples in "Finland, Israel, Germany and America" as well as on a sample in South Africa (Meehan, 2004, p. 55). The CASQ is a "two-dimensional chart listing 20 coping strategies applied to eight problem areas" which include school, parents, peers, leisure time, romantic partner, self, job and

future (Seiffge-Krenke & Shulman, 1990, p. 360). The CASQ was developed in Germany and after email contact with the developer, Dr. Seiffge-Krenke, the English translation of the instrument and the scoring procedures, were sent to the researcher. Meehan reported in her thesis that "the internal consistencies for the subscales are 0.80 for active coping, 0.77 for internal coping and 0.76 for withdrawal" (Meehan, 2007, p. 55).

The SIQ was standardised on a sample of normal high school populations (Reynolds, 1988) as well as high school samples with suicide attempters (Brown, Overholser, Spirito, & Fritz, 1991), adolescents in inpatient psychiatric settings (Hewitt, Newton, Flett & Callander, 1997) and with a sample of physically abused adolescents (Shaunesey, Cohen, Plummer, & Berman, 1993). The questions of the SIQ are based on Reynolds' theory that suicidal cognitions and behaviours exist on a continuum, "a hierarchy of seriousness" (Goldston, 2000, p. 90). In a sample of high school students the test-retest reliability was found to be 0.72 over a 4-week interval and the SIQ was found to have good internal reliability for standardised samples of grade 10, 11 and 12 learners in America with Cronbach's alpha at 0.97 (Reynolds, 1988). "Correlations of the SIQ with self-reported measures of depression ranged from 0.55 to 0.58. Correlations with hopelessness were 0.47 and 0.48, with helplessness the correlation was -0.36." (Verhulst & van der Ende, 2006. p. 101) All correlations were collected from high school samples. Reynolds (1988) reports that the SIQ is not an instrument designed to predict suicide so predictive validity cannot be assured.

Procedure

A co-educational high school in Pietermaritzburg was asked to allow their learners to take part in the study. With permission from the headmaster and the Department of Education, (available on request) the school guidance counsellor set aside time for data collection to be done.

The learners who had received parental consent and those who were 18 years or older and who wished to participate in the study met with the researcher and the school's counsellor in the school's team teaching room 20 minutes before the morning tea break. The researcher collected any outstanding parental consent forms and the school counsellor removed any learners from the room who had not received permission from their parents. Once the

learners were assembled the aim of the research and the process was explained and any questions answered. This was repeated approximately four times, as the arrival of the learners at the venue was erratic. Once everyone had assembled and all learners had been informed about the nature of the research learners were given the choice to stay and participate in the research or leave. At this point approximately five learners left the room leaving a sample of 65 learners. Learners that remained were asked to read the informed assent letter and sign to show their assent at the bottom of the page. Following this the learners were again briefly guided through the three questionnaires. The process for completing each questionnaire was explained, and any further questions answered. Learners were implored to answer the questionnaire to ensure that their answers were true of them and were asked not to confer with their friends. The questionnaires were thereafter completed in silence. As the learners began answering the questionnaires they encountered problems and some were confused by the instructions, specifically of the CASQ. The researcher walked around the room answering any questions that arose. Once the learners had completed the questionnaires they were free to go. They handed in their questionnaires either to their school counsellor or to the researcher and left the venue. The average time taken to complete the questionnaires was 20 minutes.

Ethical considerations

Emanuel, Wendler, Killen and Grady, 2004, suggest principles and benchmarks that 'constitute a systemic framework that specifies core practical considerations necessary to ethically justify research in developing countries' (2004, p. 935). This framework has been used in considering the ethical implications in the present study.

- **Social value**

The value of this research is that the results of the study could generate increased knowledge in the area of suicidal ideation and adolescence in the South African context.

- **Scientific validity**

Neither the SIQ nor the CASQ have been normed on the local South African population and for this reason the data should be interpreted with caution.

- **Fair selection of study population**

Although the sample used in this study involves vulnerable participants, under 18 years old, various steps were taken to protect the adolescents in the form of informed consent and assent as well as the right to withdraw without penalty.

- **Favourable risk benefit ratio**

The potential benefit of knowledge gained through this research is deemed to be higher than the potential risks to the participants. Steps were taken to ensure that should a participant become distressed owing to an issue raised in one or both of the questionnaires they would be referred for appropriate assistance. The information sheet distributed to participants stated that should the questionnaires raise any upsetting issues for the respondent they were encouraged to ask their school counsellor or the researcher for advice or referral. Prior discussions took place with the school counsellor to prepare her for the study.

- **Informed consent**

Informed consent was obtained through parental consent as well as individual learner assent. Informed consent and assent for each learner was received before the learner was able to participate in the study. Without parental informed consent learners under the age of 18 were not eligible to take part in the research, all learners needed to give informed assent before they were allowed to take part in the study. Learners' participation was voluntary and all learners had the right to withdraw from the research at any point without penalty. Responses were anonymous in an attempt to protect participants' privacy and as a protection from any social stigmatisation. Permission from the relevant gatekeepers to conduct the research was obtained before the research process began; in this case these were the KwaZulu-Natal Department of Education as well as the headmaster of the school where the research took place.

- **Respect for recruited participants and study communities**

No identifiable information was asked of the participants. Their privacy remained intact. The name of the school was not referred to. The school was given a pseudonym, if referred to, by the researcher to protect the school's privacy and that of its staff and learners. Cover letters were attached to the questionnaires informing the participants that they are free to withdraw from the research at any time without penalty. The researcher was on hand to help

participants to answer any questions that arose during the research process. The researcher also monitored the participants during the process to determine if any participant was experiencing undue stress. If any participant had experienced undue stress or anxiety the participant would have been given the option to terminate participation. A report will be provided to the school on completion of the research for perusal by staff as well as participants and their parents or guardians (Emanuel, Wendler, Killen & Grady, 2004).

Data Analysis

Coping Across Situations Questionnaire (CASQ)

The 21 questions were grouped into three categories: Active coping strategies (questions 1, 2, 3, 6, 15, 18, and 19), Internal coping strategies (questions 4, 5, 9, 10, 11, 13, 14) and Withdrawal coping strategies (questions 7, 8, 12, 16, 17, and 20). Cronbach's coefficient alpha was applied to the three groupings to obtain a measure of internal consistency, "estimated by determining the degree to which each item in a scale correlates with each other item" (Terreblanche et al., 2008, p. 154). The Cronbach's alpha of the subscales for this sample was determined as follows: Active – 0.677, Internal – 0.682 and Withdrawal – 0.638. These values of alpha indicate acceptable consistency of responses to questions within the groupings. Meehan (2007) reported Cronbach's alpha for the subscales in her research: Active – 0.78, Internal – 0.73 and Withdrawal – 0.75 (2007, p.562). Studies completed in Germany and Israel reported alpha scores of Active – 0.80 and – 0.72, Internal – 0.77 and – 0.71, and Withdrawal – 0.72 and – 0.60 respectively (Meehan, 2007, p. 562). The internal reliability consistency figures in the present study compare well with these other studies and appear comparable to the Germany, Israeli and South African studies already conducted. In the current research Cronbach's alpha was also determined for the total score of the CASQ – 0.801.

The Chi-square test of independence was applied to ascertain whether significant relationships existed between the responses to the questions and the categories of the given demographic variables.

Average scores were calculated for each coping strategy and each grouping was analysed to ascertain whether significant differences in the average scores existed between the different

classifications of age, race and grade. The relative importance of each coping skill for each problem area was also calculated.

Suicide Ideation Questionnaire (SIQ)

The average score for each question was calculated. The score indicated how frequently the idea was expressed. Chi-square goodness of fit was applied to each question (questions 1 – 30) to ascertain whether any option was selected significantly more often than others. For each of the 30 questions average scores were calculated and the relationship between suicidal ideation and the demographic variables, race, age and grade were examined. Analysis of variance (ANOVA) was applied to test whether the average scores differed for categories of race, age and grade.

The 30 questions were grouped into three categories:
1) Wishes and plans of suicide (questions 1, 2, 3, 4, 7, 14, 16, 17, 18, 20, 29, and 30);
2) Responses and aspects of others (questions 9, 10, 11, 15, 24, 25, 26, and 27); and
3) Morbid ideation (questions 5, 6, 8, 12, 13, 19, 21, 22, 23, and 28).
Each grouping was analysed to investigate whether mean scores differed across the demographic variables of race, age and grade. Cronbach's alpha for these groups is 0.961, 0.914, and 0.921, respectively, indicating that the questions within each group are consistent and appear to measure a single "theme" each. Cronbach's alpha for the total score of the SIQ for this sample is 0.975 this can be compared to Reynolds, (1988) who reported an alpha of 0.97 on standardised samples of grade 10, 11 and 12 students.

Following this analysis Pearson's correlation, a reflection of the degree of linear relationship between two variables, was applied to the data to test for significant correlations between the three suicidal ideation groupings of the Suicide Ideation Questionnaire with the three coping strategies groupings of the Coping Across Situations Questionnaire. This exercise examined the hypothesised correlation between functional and maladaptive coping strategies and suicidal ideation.

Chapter 5

Results

As indicated in the methodology section the sample consisted of 65 male adolescents between the ages of 15 and 19 from a single co-educational school in the Pietermaritzburg area. Of the 65 adolescents sampled for this study 53.8 per cent (35 individuals) were over the age of 18. The remaining individuals were 15 (8 individuals, 12.3%), 16 (14 individuals, 21.5%) and 17 years old (8 individuals, 12.3%). A graphic representation of this is given in Figure 1.

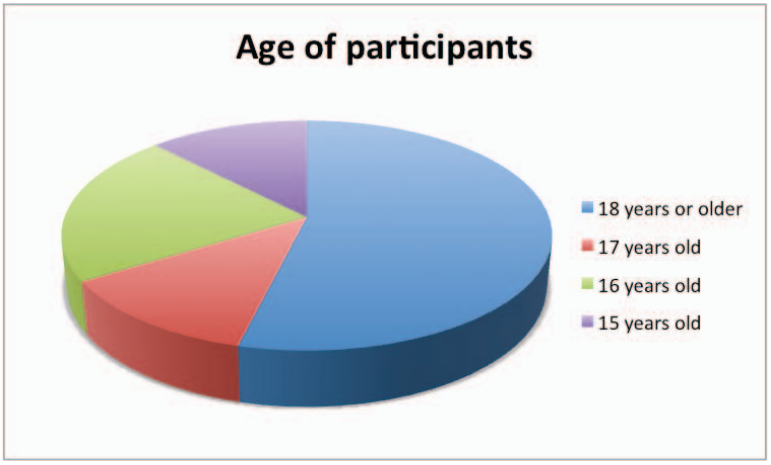

Figure 1: Age of participants (%)

Figure 2 illustrates that primarily English speakers (45 individuals, 69.2%) made up the sample with the remainder speaking Zulu (18 individuals, 27.7%) and Afrikaans (2 individuals, 3.1%).

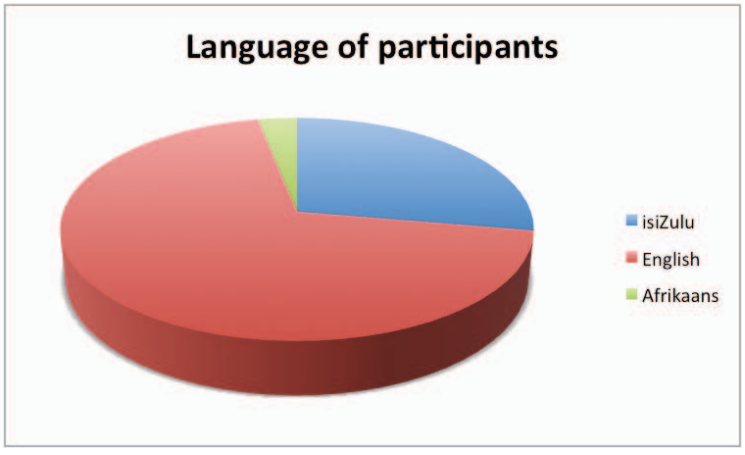

Figure 2: Language of participants (%)

The participants were offered six categories in which to classify themselves: 'White' (29 individuals, 44.6%), 'Black' (18 individuals, 27.7%), 'Indian' (13 individuals, 20%), 'Coloured' (4 individuals, 6.2%) and 'Asian' (1 individual, 1.5%) and 'Other' a category which no participant chose to use. Figure 3 shows the configuration of population groups in this sample. The categories used to classify population group have been taken from *Statistics South Africa:* www.statssa.gov.za. These are the classifications used in the national census.

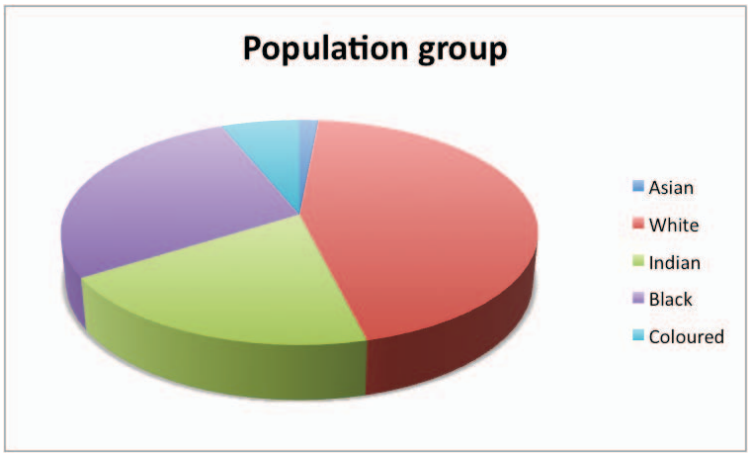

Figure 3: Race of participants (%)

The sample only included adolescents still attending school and spanned four grades, grade 9 (8 individuals, 12.3%), grade 10 (9 individuals, 13.8%), grade 11 (14 individuals, 21.5%), and grade 12 (34 individuals, 52.3%). This has been represented in Figure 4.

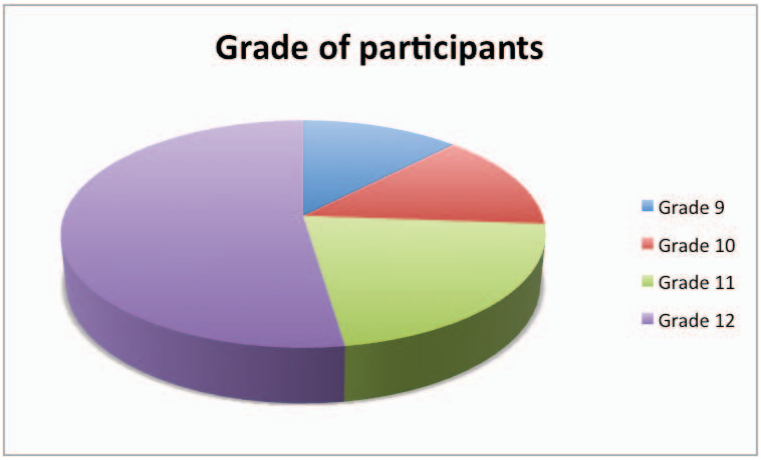

Figure 4: Grade of participants (%)

From the data presented above it can be seen that the majority of participants were white, English speaking 18 or 19-year-old males in grade 12 with the minority being participants

who were 15 years old, most of whom fell into the grade 9 category. Though there was a single Asian participant in the sample, the smallest group of participants according to the population group category were the Coloured participants.

For the purpose of the research the one Asian respondent was re-categorised as Indian. The re-categorisation of the Asian participant is controversial. In general, statistical analyses exclude a category with only one member and in hindsight this would have been more appropriate as the respondent did not belong in any major South African demographic category. However, with a relatively small sample such as this, it could be argued that it is more worthwhile to compromise the demographics in such a minor way in order to accommodate this member rather than exclude the case entirely.

The sensitivity of the population (adolescents) as well as the sensitivity of the research area (suicidal ideation) can be attested to when one notes that a large number of participants were over the age of 18 and therefore did not need to obtain parental/guardian consent before participating in the research. Sampling such a sensitive population can be very difficult and this is exacerbated when the topic of the research is deemed of a sensitive nature as well. This therefore points to a possible reason why the sample size was so small.

Each demographic presented above was tested against the results of the two questionnaires, *Coping Across Situations Questionnaire (CASQ)* and *Suicide Ideation Questionnaire (SIQ)*, to identify any significant differences between any of the groups. In examining all demographic variables in relation to the *CASQ* and *SIQ*, one-way ANOVA was used. In situations where the sample is of a suitable size, analysis of differences on the overall scores would be done, and *only* if significant differences were found would further analyses be done. However owing to the small size of this sample, differences were checked on three levels: the total score achieved, the score of the subscale, and the score of the individual item. Differences were found, but only a few of these were significant; again this could be attributed to the small sample. Owing to this, the means have been included in the results in an attempt to indicate the possible areas where significant differences may have arisen had a larger sample been accessed. This suggestion is of course speculative. The small sample size does not encourage generalisation to larger samples.

The total score on the *CASQ* was not analysed as the literature on the scale itself suggested that the categories that the questions were grouped into are somewhat separate from each other. It is however, interesting to note that Cronbach's alpha for the entire sample on the *CASQ* was 0.801; this is higher than the alpha coefficients on any of the subscales of the questionnaire.

The descriptive statistics of each of the subscales to be used as a reference point for other reported means is summarised in Table 6.

Table 6

Descriptive Statistics of each of the Subscales of the CASQ

	Sample size	**Mean**	**Std. Deviation**	**Range**	**Alpha**
Active Coping	65	18.63	7.78	1 – 33	0.677
Internal Coping	65	19.97	9.32	0 – 38	0.682
Withdrawal	65	14.02	8.28	0 – 33	0.638

Table 6 indicates that on average "internal coping" was reportedly used more frequently than "active coping" and "withdrawal"; with "withdrawal" reportedly being used least frequently by this sample.

Responses to the *Suicide Ideation Questionnaire (SIQ)* can be used as a point of reference for other reported means. They are summarised in Table 7 below:

Table 7

Descriptive Statistics of the Total Score and each of the Subscales of the SIQ

	Sample size	**Mean**	**Std. Deviation**	**Range**	**Alpha**
Wishes and plans of suicide	65	10.77	16.04	0 – 61	0.961
Response and aspects of others	65	7.77	10.27	0 – 44	0.914
Morbid Ideation	65	13.62	14.26	0 – 50	0.921
Total	65	32.15	38.45	0 – 152	0.975

Differences on the *CASQ* and *SIQ* will be discussed in terms of the various demographic variables: age, language, race and grade in further detail below. Following this the correlations between the *CASQ* and *SIQ* will be presented.

Coping Across Situations Questionnaire

Age

In the analysis of the subscales and the factor "age", no subscale violated the assumption of homogeneity and none reached significance for this demographic: "active coping" (p=0.521[*]), "internal coping" (p=0.375), and "withdrawal" (p=0.942). An inspection of the mean distributions revealed that even with a larger sample, significance on any of the subscales was unlikely. However, it appeared that 15 and 19 year-olds scored highly in all subscales (including "withdrawal"), with the remaining age groups showing little or no difference. Table 8 summarises these means:

Table 8

Mean Distribution of CASQ Subscales by Age

	15 years	**16 years**	**17 years**	**18 years**	**19 years**
Active Coping	20.25	16.07	17.88	19.06	23.67
Internal Coping	23.38	16.5	17.5	21.34	19
Withdrawal	15.25	13.64	13.13	13.78	17.33

19 year-olds on average appear to use "active coping" more frequently than any other age group and more frequently than other modes of coping strategies. On average 15 year-olds seem to tend to prefer to implement "internal coping" strategies when faced with difficulties rather than another coping strategy. 15 year-olds also seem to be the age group that uses "internal coping" the most in comparison to the other age groups. Across the age groups the means seem to indicate that "withdrawal" is used the least as a coping strategy, with the lowest average scores for each age group being reported in this category.

When looking at the items of the *CASQ* individually, only question 11, *I make compromises*, (p=0.011) reached both significance and satisfied the assumption of homogeneity. When examining the means plot it could clearly be seen that the difference lay between 18 year old

[*] Due to computer error Chi Square values and degrees of freedom were lost.

participants and the rest of the sample. The remaining means plots show a fairly random set of patterns, which may help to explain the lack of differences by subscale. This finding indicates that in this sample 18 year-olds were significantly more likely to make compromises when faced with a difficult or stressful situation than any other age group.

Language

In this instance the subscales of the *CASQ* did not violate the assumptions of homogeneity, however neither did any of them reach significance for the factor of language. Again, due to the small number of Afrikaans speakers in the sample, the means of those that had classified their first language as Afrikaans were not examined. It was found that on the subscales of "active coping" and "withdrawal", those that categorised themselves as English first language speakers had means that were higher (18.53 and 14.31, respectively) than those that categorised themselves as Zulu first language speakers (means of 18.44 and 13.73 respectively). Conversely when looking at the subscale "internal coping", Zulu speakers (mean of 21.67) had means that were higher than those of English speakers (mean of 19.49). It was observed that of each individual item, none indicated significant difference. Furthermore the means plots revealed that the patterns were, once again, fairly random. It seems from these results that language has little impact on coping strategies implemented by male adolescents in this sample. The result in general indicates that both English and Zulu speakers prefer to use "internal" modes of coping which echoes the finding that on average the sample reported to use "internal coping" strategies more frequently than other methods of coping as seen in Table 6.

Race

The subscales of the *CASQ* did not reveal any significant differences among any of the designated population groups. The sample of Coloured participants was very small (n=4). In an attempt to ensure that this population group was not misrepresented it was thought best to omit the sample of Coloured participants to prevent reporting a possibly skewed result. It is believed that the Coloured population group was not accurately represented in the sample. Table 9 summarises the findings:

Table 9

Mean Distribution of CASQ Subscales by Population Group

	Black	**White**	**Indian**	**Coloured**
Active Coping	18.44	18.03	19.36	21.25
Internal Coping	21.67	18.62	21	18.5
Withdrawal	13.72	14.69	14.64	8.25

The mean distributions of each of the subscales showed specific differences in what coping strategy was most commonly chosen by individuals from specific population groups in this sample. In comparison to the other population groups Indian participants scored highest on "active coping", Black participants scored highest on "internal coping" and White pupils scored highest on "withdrawal".

From the table it can be seen that Black participants used "internal coping" more frequently than other race groups in this sample. However, in comparison to the frequency with which other race groups used the three coping strategies, the Indian and White participants still used internal coping strategies more frequently than they used other modes of coping, just on average less frequently than Black participants.

A closer inspection of each individual item illustrated that there were no significant differences among any of the groups on any one item. The multiple comparisons confirmed this and the means plot for individual items reflected the patterns already seen with the total scores of each of the three subscales, Figures 5, 6 and 7. Figure 5, Figure 6 and Figure 7 also illustrate the skewed result from the Coloured respondents reiterating why it was important to refrain from reporting on this sub-group in the study.

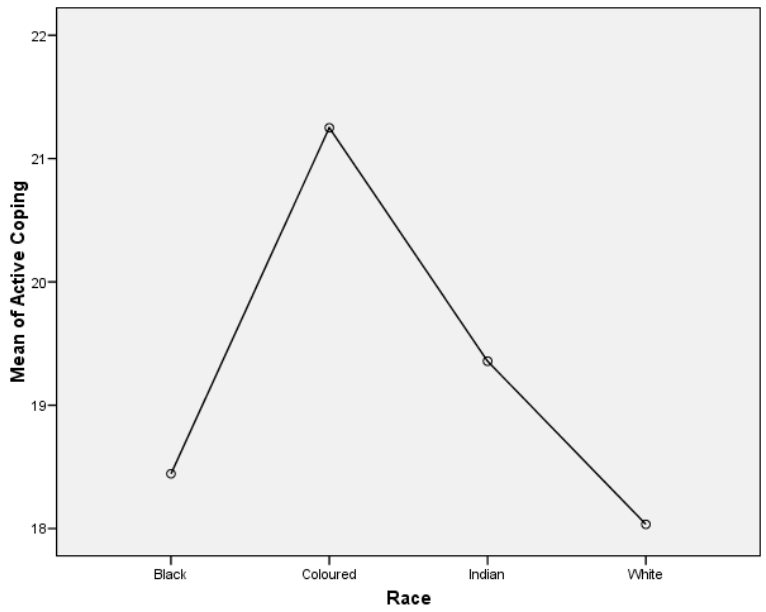

Figure 5: *CASQ* Subscale Total Score - Active Coping mean plot: demographic: race

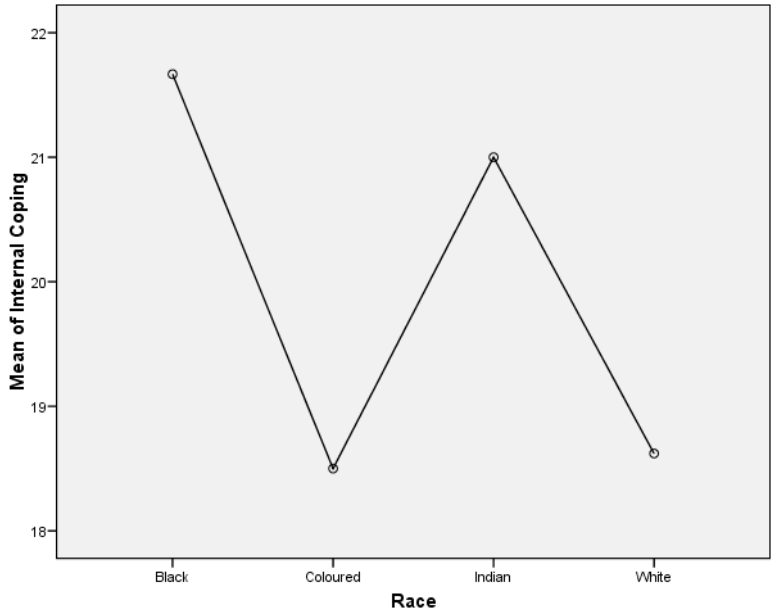

Figure 6: *CASQ* Subscale Total Score - Internal Coping: demographic: race

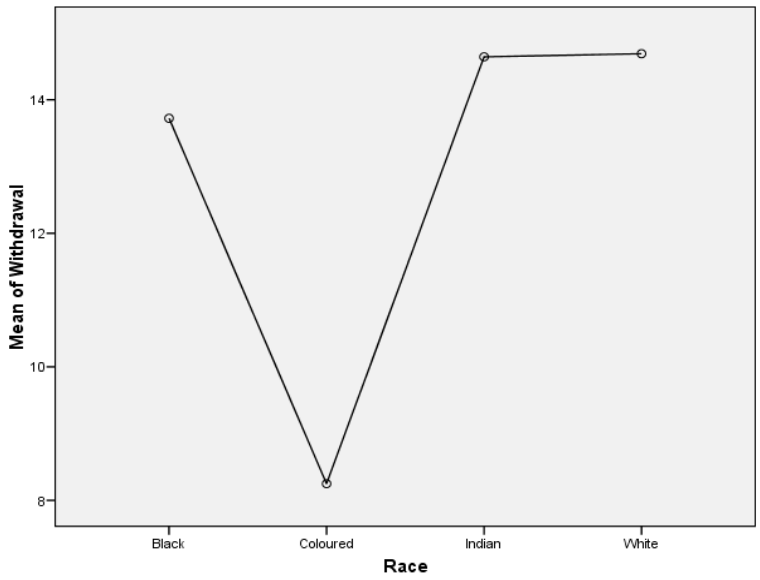

Figure 7: *CASQ* Subscale Total Score - Withdrawal: demographic: race

Grade

Analysis of the subscale of "internal coping" in relation to grade on the CASQ appeared to be approaching significance (p=0.072) and did not violate the assumption of homogeneity. The remaining two subscales did not reach significance.

The mean differences between the groups showed that grade 10 and grade 11 respondents had considerably lower means on the subscales of internal and active coping in comparison to the rest of the sample. However on the subscale of withdrawal the grade 10 mean was the highest. Table 10, summarising these means, is presented below.

Table 10

Mean Distribution of CASQ Subscales by Grade

	Grade 9	**Grade 10**	**Grade 11**	**Grade 12**
Active Coping	20.25	16.44	16.43	19.42
Internal Coping	23.38	12.89	19.14	21.12
Withdrawal	15.25	16.44	9.57	14.61

On average those in grade 10 scored 16.44 on "withdrawal", a mean higher than all other grades on this subscale. This may indicate that grade 10s use "withdrawal coping" strategies more than other grades, though "withdrawal" still is not this grade's most preferred coping

method. It seems that "active coping" and "withdrawal" were used with the same frequency and "internal coping" strategies were used the least by this group. Seemingly grade 9s on average resorted to "internal" methods of coping before active or withdrawal methods. This is seen again in grade 11 responses and grade 12. In grade 10 responses it seems the opposite was true.

Suicide Ideation Questionnaire

Age

The total score of the *SIQ* did not violate the assumption of homogeneity (p=0.745), but did not show any significant differences. The means on this factor showed that with a larger sample differences may exist between 16 year olds (45.5) and the rest of the sample (a mean range of 23.67-31.75). By looking at the mean scores for the total score it can be seen that 16 year olds from this sample on average had a greater propensity for suicidal ideation than the other age groups in the sample. Analysis of the subscales of the *SIQ* revealed a similar result. None of the subscales violated the homogeneity assumption however, and not one reached significance. However, when examining the mean distribution it is clear that 16 year olds scored higher on every subscale, reminiscent of the findings on the total score – see Table 11. The higher scores were particularly evident in the subscales of "wishes and plans for suicide" and "morbid ideation". Further analysis again revealed the same pattern of 16-year-old respondents producing a consistently higher mean. The only question that reached significance and did not violate any assumptions was question 6: *'I thought about death'*. In this instance again 16 year olds had a significantly higher mean.

Table 11

Mean Distribution of SIQ Subscales and Total Score by Age

	15 years	**16 years**	**17 years**	**18 years**	**19 years**
Wishes and plans of suicide	8	15.07	8.38	10.78	4.33
Response and aspects of others	6.25	10.43	9.38	6.84	5
Morbid ideation	9.88	20	14	11.59	14.33
Total Score	24.13	45.5	31.75	29.22	23.67

Language

Again the total score of the *SIQ* did not violate the assumption of homogeneity (p=0.316) though again no significant differences were found. The mean distribution showed Afrikaans respondents with a mean of 17, however the sample (n=2) was too small to make any conclusions. Zulu respondents displayed a mean of 24.44. English respondents' mean of 35.91 indicates that English speaking respondents seemed to report higher levels of suicidal ideation than Zulu speaking respondents. The subscales of the *SIQ* also did not reach any form of significance but showed large mean differences between English speaking and Zulu speaking respondents.

Table 12

Mean Differences on SIQ Between English Speaking and Zulu Speaking Participants

	English	**Zulu**
Wishes and plans of suicide	11.89	8.61
Response and aspects of others	8.69	5.89
Morbid Ideation	15.33	9.94

An inspection of each question did not reveal any significant differences, rather keeping to the pattern already seen in analysis of the total score and subscale score. This was seen throughout with the exception of three questions. Higher means, though not significant, for Zulu speakers were noticed on questions 7. *I thought about what to write in a suicide note,* 24. *I thought that the only way to be noticed is to kill myself* and, 28. *I wondered if I had the nerve to kill myself.*

Race

The total score of the *SIQ* by race did not violate the assumption of homogeneity (p=0.223) or reach significance (p=0.441). The mean distribution of the total scores showed that differences may lie between Black (mean = 24.44), White (mean = 36.03) and Indian participants (mean = 39.93). It seems from these results that in this sample Indian participants reported higher levels of suicidal thoughts than White or Black respondents and Black participants reported the lowest levels of suicidal ideation among these three groups. The Coloured population group consisted of only 4 respondents and so although it may appear that there is significant difference between Coloured respondents and other population

groups this is more than likely a product of the small sample size and therefore the Coloured population group was not included in this analysis.

As with the demographic, age, no significant differences for race group were found on the subscales of the *SIQ*. All three subscales showed similar patterns, with either White or Indian participants having the highest means and Black participants showing consistently lower means. This pattern was replicated on the level of individual item, though no questions reached significance. No significant difference was found on any of the subscales. From analysis of the total score to analysis of the subscales an analogous pattern was seen in the means of each race group. Figure 8 shows a graphic representation of this pattern.

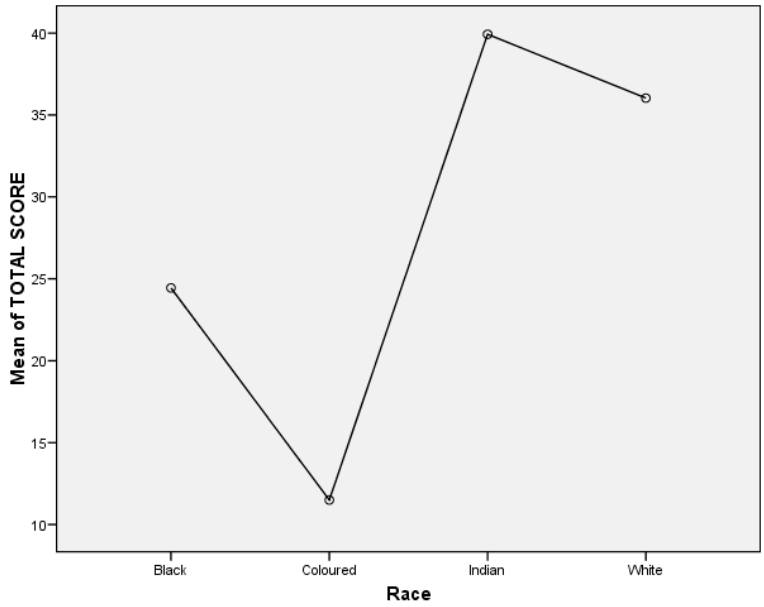

Figure 8: *SIQ* Total score mean plot – demographic: race

Grade

The total score of the *SIQ* reached significance on the factor of grade (p=0.042), but unfortunately violated the assumption of homogeneity (p=0.022). The mean distribution of the total score showed grade 10 respondents to have the highest mean (57.67) and grade 11 respondents had the lowest mean (15.36). On average, grade 10s' responses were higher than any other grade. This indicates that on average grade 10 learners in this sample had more suicidal thoughts than any other grades, and grade 11 learners had the least. The

remaining two grades, grade 9 and grade 12, had means of 24.13 and 30.64 respectively, as shown in Table 13.

Table 13

Mean Distribution of SIQ Total Score by Grade

	Grade 9	**Grade 10**	**Grade 11**	**Grade 12**
Total Score	24.13	57.67	15.36	30.64

As with the total score, the subscales of "response and aspects of others" (p=0.05) and "morbid ideation" (p=0.023) reached significance. However, the "response and aspects of others" subscales violated the assumption of homogeneity (p=0.002). Taking this into consideration, a table of means for each subscale according to grade has been presented below. Table 14 indicates that significantly more grade 10s reported suicidal thoughts concerning morbid ideation than any other grade.

Table 14

Table of Means for each Subscale of the SIQ According to Grade

	Grade 9	**Grade 10**	**Grade 11**	**Grade 12**
Wishes and plans of suicide	8	17.89	2.79	11.45
Response and aspects of others	6.25	14.67	4.14	6.7
Morbid Ideation	9.88	25.11	8.43	12.48

Closer inspection of each individual question revealed that questions 5. *I thought about people dying* and, 6. *I thought about death* differed significantly by grade without violating any assumption of homogeneity. Questions 14, 24, 26, 27, and 29 also reached significance. However, the assumption of homogeneity was violated with these five questions.

The plotted means, Figure 9, show that the highest means consistently belonged to the grade 10 participants and the lowest mean to the grade 11s. The pattern seen on each question, according to the demographic of grade, seems to mimic that of the total score mean plot, Figure 9.

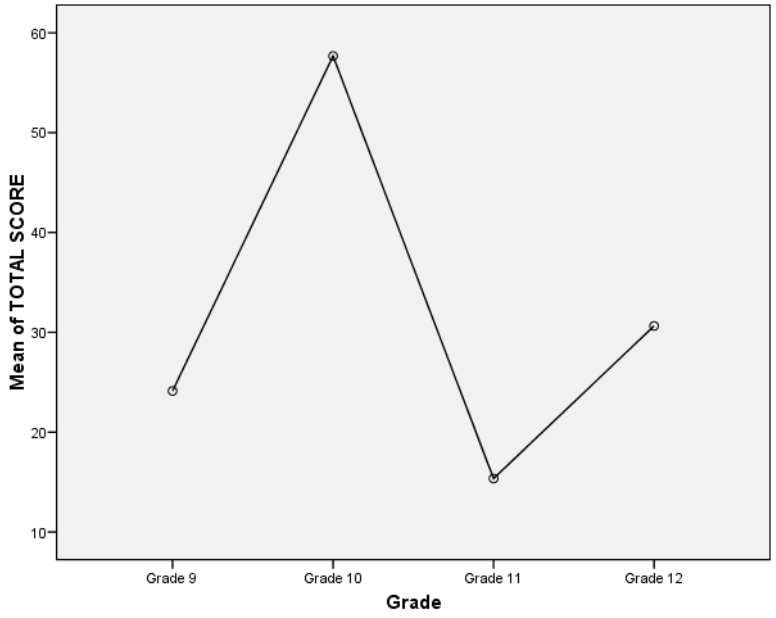

Figure 9: Total score mean plot – demographic: grade.

Table 15

Correlations Between CASQ and SIQ

		Wishes and plans of suicide	Response and aspects of others	Morbid ideation	SIQ Total	Active Coping	Internal Coping	Withdrawal
Wishes and plans of suicide	Pearson Correlation	1	0.841	0.842	0.954	-0.186	-0.1	0.438
	Sig. (2-tailed)		0.000	0.000	0.000	0.137	0.428	0.000
Response and aspects of others	Pearson Correlation	0.841	1	0.853	0.934	-0.077	-0.023	0.483
	Sig. (2-tailed)	0.000		0.000	0.000	0.541	0.858	0.000
Morbid ideation	Pearson Correlation	0.842	0.853	1	0.95	-0.134	-0.05	0.53
	Sig. (2-tailed)	0.000	0.000		0.000	0.286	0.691	0.000
SIQ Total	Pearson Correlation	0.954	0.934	0.95	1	-0.148	-0.066	0.508
	Sig. (2-tailed)	0.000	0.000	0.000		0.239	0.599	0.000
Active Coping	Pearson Correlation	-0.186	-0.077	-0.134	-0.148	1	0.577	0.205
	Sig. (2-tailed)	0.137	0.541	0.286	0.239		0.000	0.101
Internal Coping	Pearson Correlation	-0.1	-0.023	-0.05	-0.066	0.577	1	0.429
	Sig. (2-tailed)	0.428	0.858	0.691	0.599	0.000		0.000
Withdrawal	Pearson Correlation	0.438	0.483	0.53	0.508	0.205	0.429	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.101	0.000	

Table 15 indicates that the *SIQ* correlated very highly and significantly with its subscales as would be expected. Each of the subscales also correlated very significantly with each other, suggesting, as Cronbach's alpha does, that the scale was reliable and that the subscales deal with equally similar topics

However, all the subscales of the *CASQ* did not correlate significantly with each other, encouraging further interpretation. "Internal coping" correlated significantly with both

"active coping" and "withdrawal", however, "withdrawal" and "active coping" did not correlate significantly with one another (p=0.101).

The hypothesis that "active" and "internal coping" would correlate negatively with the total of the *SIQ* or subscale totals of the *SIQ* was not confirmed by the correlations, though it was not refuted either. Very small correlations are evident, making it difficult to determine a relationship between the variables. The variables seem to be somewhat negatively related, indicating a possibility that larger samples may provide more conclusive results.

It was also hypothesised that "withdrawal" as a coping strategy would correlate significantly and positively with the total and subscale totals of the *SIQ*. This was confirmed. All subscales of the *SIQ*, as well as the total, are highly significantly related to the "withdrawal" subscale of the *CASQ*.

The most interesting finding from the results from the *CASQ* is that on average "internal coping" strategies were reportedly used more commonly than the other two coping strategies by the respondents. Within the sample, "withdrawal" was reportedly used the least by the participants. Language and age had little impact on the coping strategies used by participants. It seems that each race group used "internal coping" skills more commonly than any other but that they used the other modes of coping with varied frequency: Indian participants used "active coping" skills more commonly than any other population group, Black participants used "internal coping" more than any other population group and White participants used "withdrawal" as a coping mechanism with more frequency than any other population group. The demographic of grade showed that, participants in grade 10 relied on "withdrawal" more than any other grade and used "internal coping" strategies the least whereas participants in all other grades reportedly relied on "internal coping" the most.

In summary, the main results of this study indicate that grade 10s and 16 year olds reported the highest levels of suicidal ideation when compared to other age groups and grades, and that grade 11s and 17 years old reported the lowest level of suicidal ideation within the sample. The results seem to indicate a pattern where highest levels of suicidal ideation were noted in the Indian participants and lowest levels noted in the Black participants. Language seemed to have little impact on the participants' level of suicidal ideation.

Only hypothesis 2 was confirmed; that is that those participants who scored high on the *SIQ* reportedly also used "withdrawal", a maladaptive coping mechanism. Hypothesis 1, that adaptive coping strategies would correlate highly with low levels of suicidal ideation, was not confirmed. Hypothesis 3 could not be confirmed or denied with regard to all the demographic characteristics as in some instances the assumption of homogeneity was violated and significant differences were only found in a few cases. In these instances patterns have been noted and commented on.

Chapter 6

Discussion

In the present study the majority of participants were white, English speaking, grade 12s. This is to be considered when interpreting the results. A possible reason for one aspect of this feature of the participants is the controversial subject matter of the research. Many parents/guardians may not have given parental consent for their sons to participate in the study believing that exposure to such topics and education on these topics may increase the risk that the adolescent engages in suicidal behaviour. This view has of course been proven not to be true. Literature indicates instead that suicide education and school-based programmes teaching adolescents to identify suicide warning signs, increase self-esteem and improve coping strategies are successful suicide prevention strategies (Maples, Packman, Abney, Daugherty, Casey & Pirtle, 2005). In the instance of the current research a lack of psycho-education on the part of parents/guardians may have contributed to the belief of the myth mentioned above (McKenry, Tishler, Christman, 1980; Nelson, Galas, Cobain & Espeland, 2006).

On review of the *Coping Across Situations Questionnaire* and the *Suicidal Ideation Questionnaire* a number of interesting observations can be made, however in view of the relatively small sample these results should not be over-analysed.

Though only male adolescents were included in the sample of the present study, the findings will be compared to results of similar studies done in South Africa. Meehan (2004) and Senatore (2006) reported no significant difference between genders in coping strategies used. They both reported that "internal" coping strategies were used the most by both boys and girls and "withdrawal" was used the least. This finding was replicated in the male only sample of the present study. The results also indicated that individuals did not implement one coping strategy globally but rather determine what style of coping strategy is necessary for the given situation. This refutes Haan's (1977) theory that an individual is either a "coper or an avoider" (in Seiffge-Krenke &Shulman, 1990, p. 368) and rather supports the theory that "situations rather than dispositions determine coping behavior" (Suls et al., 1996, p. 715). It has previously been reported that males are more likely to engage in aggressive, maladaptive

coping strategies when faced with stress than they are to find more adaptive ways of coping. The findings reported in this study indicate some difference from findings reported previously (Prior, 1999, in Frydenburg, 1999). The research may indicate that to some degree South African male adolescents do not behave in the way expected of them from international research. Further studies examining the difference between population groups may be beneficial.

The school used in the research study is located in an urban, 'Westernised' area of South Africa rather than a rural area. International research posits that 'Westernised' adolescent males are more likely to display maladaptive coping strategies and behave in a manner that reiterates the 'boys don't cry' stereotype (seen as a maladaptive reaction to situations) (Prior, 1999 in Frydenberg, 1999). Though cultural and environmental factors were not a focus of the current research it seems that factors such as these need to be considered in future research. It seems from the findings that 'Westernised' may be too broad a term, as 'withdrawal' was not indicated as the predominant coping strategy of any group in the sample. As this finding echoes that of Meehan (2004) and Senatore (2006), it may indicate that the South African multicultural context needs comprehensive investigation before any assumptions or deductions can be made.

Language did not have a significant impact on the coping strategies implemented by adolescents in this sample, nor on the levels of suicidal ideation experienced. In a larger sample significant differences in coping between English speakers and Zulu speakers may be indicated but this was not the case in this study. In examining the mean differences, English speakers had higher means in the categories of "active" coping and "withdrawal" and Zulu speakers had higher means in the category of "internal" coping. The results of the *SIQ* indicated that English respondents had higher levels of suicidal ideation than their Zulu counterparts. Though these results cannot be over-interpreted it is possible that future studies may find that lower levels of suicidal ideation in Zulu speakers can be accounted for by the coping strategy used. The results seem to suggest this but no significant findings were reported. However, an examination of cultural differences may be more opportune and account for differences better than language differences in future studies because language and race may be poor proxies for culture. Additionally, it cannot be ruled out that the lower score on the *SIQ* among the black respondents is due to a comprehension difficulty with the instrument. Though it cannot be assumed that all black respondents speak English as an

additional language, it needs to be considered that responding in a language that is not the first language of the respondent may have influenced the results of the study.

No significant differences were revealed on the 'race' demographic for either the *CASQ* or the *SIQ*. Minor differences were noted in the mean scores for which coping strategy each population group used the most, which might be accounted for by cultural differences though these were not investigated. Indian participants indicated the highest levels of suicidal ideation in the sample followed closely by White respondents. As these were not significant differences, and due to the small sample, it cannot be inferred that suicidal ideation is highest in Indian adolescent populations in South Africa in comparison to other population groups. Though it seems that this finding is in line with the findings of other research in South Africa (Pienaar & Rothman, 2005; Pillay & Wassenaar, 1997a; Vawda, 2005) there is no significant data to confirm this. It is also possible that the slight difference between mean scores of the Indian and White participants may be more in keeping with the finding of Pillay, Wassenaar and Kramers (2001) who determined there to be little difference between non-fatal suicidal behaviour and population groups. It may be that as South Africa's new democracy grows and individuals of all population groups are interacting freely, the barriers (to education, medical care and to each other) that were previously seen among population groups are disappearing, placing all adolescents on a more equal, acculturated footing.

On the demographic 'age', little or no difference was found across age groups on the *CASQ* except when looking at the items of the *CASQ* individually. Question 11, *I make compromises*, ($p=0.011$) reached both significance and satisfied the assumption of homogeneity. On the means plot the difference lay between 18 year old participants and the rest of the sample. This finding indicates that in this sample 18 year-olds were significantly more likely to make compromises when faced with a difficult or stressful situation than any other age group. This may illustrate the relative maturity of the 18 year-olds who were more able to rely on internal coping strategies rather than withdrawal or active strategies. As the adolescent matures and settles into his role in society and place in the world he becomes more confident in himself and also less spontaneous in his decision-making. He is therefore able to trust his own decisions and make them in a rational, well thought out way. He is also less self-absorbed and therefore able to compromise and find the middle ground, realising that he is not the only person that needs to be considered in every situation (Louw & Edwards, 1997).

Though little significant difference was established across the other age groups an interesting mean distribution was noted. In the 16 year old age group, there was the smallest variance among coping strategies in comparison to the other age groups. It seems that the frequency with which each coping strategy is used is more evenly spread in this age group than in any other. It is possible that this indicates that 16 year olds are demonstrating a lack of direction or a haphazard way of thinking, and are not able to determine a dominant coping style or that they are in some stage of ambivalence and confusion. In light of Erikson's theory of psychosocial development and the stage of identity vs. role confusion adolescents have to conquer, this makes sense (Sadock & Sadock, 2007). Regarding the *SIQ*, the 16-year-old group indicated the greatest propensity for suicidal ideation with the largest mean score in the sample, (45.5), in comparison to the other ages whose mean scores ranged from 23.67-31.75. Seemingly, as no significant difference was found, this echoes the findings of Kirkaldy et al. (2004) that indicate that age has little effect on suicidal ideation in adolescents. Yet the discrepancy between the means of 16 year olds and those of other age groups in the sample seems to imply that further research into this area may be of value. Whether the result is due to the sample size or whether it reiterates Kirkaldy et al.'s findings is unknown. Further investigation is necessary.

The variable, 'grade', seems to indicate the most interesting finding with regard to the mean scores. In terms of the *CASQ* the grade 10s consistently had lower means than respondents from the other grades on active and internal coping. However, on the subscale of withdrawal grade 10s had the highest mean. Although not significant, it is interesting when compared to the findings on the *SIQ* where the grade 10 participants had consistently higher means than participants from all the other grades. In conjunction with this, where the grade 10s had the highest mean on the total score, the grade 11s had the lowest mean on the total score and the same pattern was seen on the morbid ideation scale of the *SIQ*, where the difference between grade 10 and 11 was significant. This indicates that the grade 10s reported a higher frequency in use of a maladaptive coping skill coupled with higher levels of suicidal ideation than any other grade. This is in line with the hypothesis that maladaptive coping strategies will correlate with higher suicidal ideation. However, the question is why do grade 10s report such high levels of suicidal ideation and a greater frequency of withdrawal strategies in stressful situations. Flisher et al. (1992) report that merely being in school as opposed to having dropped out increases the stress levels of an adolescent and therefore increases his

likelihood of engaging in suicidal behaviour. This is a consideration in analysis of the demographic 'grade', the only demographic included in the study directly related to school, and the only demographic in the study to yield significant results. When the South African high school system is examined, a transition with little support for learners is noticed from the grade 9 to the grade 10 year. Grade 10 is the year in which learners move from generalised study to more specific study, they move from twelve or thirteen subjects a year to seven. Therefore the workload increases, the work itself becomes more cognitively challenging and intense and the expectations on the learners increase. They feel pressure and responsibility to perform in their new roles. However, they are in a 'nowhere zone' socially: they are not seniors or juniors in the high school hierarchy and they receive little support. This is concerning, as Suldo et al. (2008b) indicate that at this stage of life individuals are susceptible to the negative effects of stress, which can be confounded by a lack of support. This in turn could "compromise [their] physical and mental health as adults" (2008b, p. 273). Individuals may express unmanageable levels of this stress in suicidal behaviour (Kerkhof & Arensman, 2001 in van Heeringen, 2001). Prevention of such behaviour in the form of support and awareness could decrease the levels of stress before they elevate to where the adolescent acts out his inability to cope with the stress he is feeling and engages in overt suicidal behaviour (Eggert, Thompson, Herting & Nicholas, 1995). A school based suicide prevention programme, such as *Response* (ColumbiaCare services, 2008) used in Oregon state in the United States of America, may be necessary to help alleviate stress in adolescents. In the current research the lack of support Suldo et al. (2008b) refers to may be due to the perception that grade 10 learners 'know the ropes' at school and aren't yet being groomed to achieve in their final year. They may, especially at the beginning of the year, feel lost and alone as their new subjects have meant that they are often separated from those friends they have had during their two junior years. On top of a new daily structure they have to make new friends or attempt to retain the previous relationships, which often can only be done at break time if no classes are shared. This can add to their feeling of isolation and disconnect and has been referred to as "social loneliness" (Argyle, 1999, p, 84). Peer relations are seen as a protective factor for the adolescent and if these are reduced the adolescent's stress intensifies and the odds of engagement in suicidal behaviour are increased (Mazza, 2005). Developmentally there is a dual pull of childhood and adulthood, physically and mentally. The grade 10 adolescent may feel overwhelmed, confused and unsupported owing to all the changes in and around him. Previously he may have asked his parent or guardian for support and help but the expectation he has of himself and the expectation he believes others have of

him may cause him to feel he needs to deal with difficulties alone, like an adult. He therefore talks less to his parents or to adults in his life; he withdraws and may become isolated and then finds that the stress he thought he was managing does not dissipate. Firestone and Seiden (1990b), among others, report that isolation and withdrawal appeared to be related to an increase in suicidal behaviour in adolescence and the finding with this grade seems to corroborate this. Liu (2005) also commented on the shift in behaviour in mid-adolescence where boys, specifically, tend to distance themselves from their families in an attempt to 'fit in'. Duncan (1997) also alludes to the adolescent's need to achieve a sense of belonging and independence different from his parents. Only as they mature do adolescents begin to reconnect with family members (in the case of male adolescents specifically with their mothers) once they feel they have established themselves as individuals. This is in line with Erikson's theory of development where at this stage of development the adolescent is concerned with forming his own identity and determining his place in the world. Literature shows that a distance from the family unit and feeling unable to discuss problems with parents or caregivers can increase the risk of suicidal behaviour, as family connectedness and a sense of closeness is a protective factor and distance from this can be destructive (Pillay & Wassenaar, 1997a).

The change in school environment occurs simultaneously as the learner enters mid-adolescence: on average learners in South Africa who are in grade 10 are 16 years old. At this age and stage of development an increase in stress (developmental, psychosocial, environmental) is evident. The respondents in this sample seem to be indicating from their responses that they are feeling overwhelmed by all the changes they are facing and, more than likely when considering Erikson's stages of development, the confusion with regard to their identity and role (Sadock & Sadock, 2007). It seems from the high levels of suicidal ideation that their levels of stress have increased from what they were before and that the grade 10s are not feeling able to cope with this change. [It is noted that it is unknown what these specific participants felt in their grade 9 year but it may be cautiously assumed that they would have responded similarly to the current grade 9s who did not respond in a manner that indicated quite so much distress and inability to cope with it.] The current research seems to support the finding by Prior (1999) that a high level of stress together with few protective factors has been related to poor coping by children. It can be assumed that the poor coping seen in the grade 10 sample is, in part, as a result of this pairing. The lack of parental involvement and parental support in the lives of children in the Pietermaritzburg area already

reported (Barnes et al., 2009) indicates that although the results in the present study were inconclusive, as there were no significant differences found on the items in the assessment that relate to parent-child relationships, the possibility needs to be considered that low levels of protective factors in a lack of parental involvement, are significant in this instance.

While the relationship that the participants report to have with their families was not examined in this study, it may be a worthwhile avenue to explore in future research. Even though in this study there was no specific evidence indicating some disengagement from the family the high rate of withdrawal as a coping strategy in this group, in light of Liu's (2005) research seems to indicate a possibility that this is the case.

The discrepancy in the mean scores between grade 10 and 11 respondents may be explained in a similar fashion. When the learner reaches grade 11 his subjects are familiar, he has settled into a routine as well as new friendships. He is physically more capable and feels more like the adult he felt he had to learn to be. The focus of the school is on the grade 11s; they are assisted, encouraged and prepared for their final year of school and nurtured for achievement. The learner no longer feels overwhelmed and he is respected in the school. He learns to be more self-reliant and withdraws less, tending instead to use "internal coping" skills he has integrated into his self in conjunction with "active coping" skills, both more adaptive strategies than used in the previous year.

Though caution is needed in making conclusions from the findings of this study there may be an indication that better support for learners for the transition from the General Education and Training phase (GET) to the Further Education and Training phase (FET) is necessary. The transition from primary to high school has already been recognised as a time when learners need support and care and it seems necessary to extend this thinking to the transition between grades 9 and 10. Future researchers may find it interesting to follow learners in a grade through their high school career to determine whether this transition is indeed difficult for learners or is merely something peculiar to this study.

The hypotheses for this study included

1. Functional coping strategies will correlate with low suicidal ideation
2. Maladaptive coping strategies will correlate with higher suicidal ideation
3. Demographic characteristics will impact coping strategies and suicidality

Hypothesis 2 has been confirmed and has already been discussed above. The first hypothesis could not be confirmed or refuted by the correlations. It seems that there is some evidence that a negative relationship could exist in this sample between functional coping strategies and low levels of suicidal ideation though this has not been proven in this study. The third hypothesis has been confirmed, but not for all demographic characteristics. Grade impacts suicidality and there is some indication that coping strategies are also influenced; this has been discussed above. There seems to be some evidence that race impacts suicidality as well as coping strategies though how and why have not been established. Language seemed to have little impact on either suicidal ideation or coping strategies in adolescent males. It seems that age also had no impact on coping strategies and little influence on suicidality. The high level of suicidal ideation associated with 16 year olds may therefore be related to the demographic of grade, though this would need to be clarified in future research.

Chapter 7

Conclusion

Though the findings of this study are unconvincing and the sample size does not warrant generalisations to larger populations, any indication of suicidal behaviour should not be dealt with lightly. As has been stated in the literature, any "suicidal acts, whether fatal or non-fatal, are indications of the severe levels of psychosocial distress being experienced" and need to be cause for concern (Pillay & Wassenaar, 2007, p. 217). The results of this study indicate that there is space for further research on this topic and that non-fatal suicide behaviour is an area that needs greater attention in South Africa.

Strengths and weaknesses of the study

For a quantitative study a large sample is optimal, which indicates that the sample size in this study is a weakness (Terreblanche et al., 2008). For this reason multiple comparisons could not be validly used to determine where specific differences lay. This is because in a larger sample there is a greater possibility that significant differences will be found and then tests such as Tukey's or other multiple comparisons can be used to determine significant differences within the subscales. The small sample also makes it unfeasible that generalisation of the findings to other populations would be possible.

Folkman and Moskowitz (2004) state that using an inventory approach to assessing coping skills may be limited. They note weaknesses in this type of collection style such as "variations in the recall period" which can impact the accuracy of the recall and report, "unreliability of recall", difficulty in interpreting the response keys and possible "inadequate sampling of coping" (Folkman & Moskowitz, 2004, p. 749).

The merit of the study is that although the findings may be inconclusive there are still some significant results. In a country where research on suicidal behaviour focusing on the people of that country is slim, any information that can broaden our knowledge and insight into the phenomenon may be useful.

Limitations and difficulties

Various limitations were evident on the completion of this study. These fall into two main categories, limitations to do with the size of the sample and limitations regarding the results of the analysis.

As the sample only consisted of male adolescents in a co-educational high school it cannot be assumed that findings would apply to adolescent males in single sex high schools as well. The impact of the type of school the adolescent attends on his coping strategies or his level of suicidal ideation is unknown.

Owing to the small size of the sample some sub-groups were not adequately represented, more specifically, Coloured participants (n=4). As their sample size was too small the participants were effectively left out of part of the study (the subscale comparisons) as the sample sizes on the subscale Race were not comparable. Had the subscale of Coloured participants been included, a skewed view of what Coloured participants are like would have been presented; an accurate statistic was not going to be reflected. For example, an incredibly low mean in the *SIQ* could indicate that they, as a population group, have very little suicidal ideation but it is not possible to know this as there were only four people in the sample. In a larger sample of Coloured participants one might find that these four were actually outliers of the larger group. From this it is obvious that it is not possible to make valuable deductions about this group from such a small sample and removal of the Coloured population group from the subscale comparisons does limit the study in this area.

The small size of the sample seemed to impact the analysis and results of the study. Few significant differences were found in the analysis of the data and it is difficult to know whether this definitely indicated a lack of relationship between coping strategies and suicidal ideation or whether it could be attributed to the small sample. Since few significant differences were found the means were included in the results in an attempt to indicate the possible areas where significant differences may have arisen had a larger sample been accessed. The determination that the lack of significant differences in the study is as a result of the small sample is of course speculative. The small sample size does not encourage generalisation to larger samples.

A number of difficulties were encountered in this study though the biggest was an unanticipated one: finding a sample. After asking the headmaster of an all boys' high school in the greater Durban area and explaining the procedure and purpose of the study, permission was given by the headmaster to request the area's Psychological Services for further permission to conduct the research at the boys' school. After a period of approximately five months permission was granted to conduct the research by Psychological services, the KwaZulu-Natal Department of Education, and the headmaster of the school. However the process was halted by the school's governing body that would not support the research being conducted, especially following concerns raised by parents who met weekly for a prayer group and who felt the research centred around a sensitive topic and that mention of suicide would increase the risk of their sons and other boys in the school participating in suicidal behaviour. Following this objection the headmaster retracted his permission and a new sample school had to be approached. A number of schools were considered until three high schools in the Pietermaritzburg area were asked in June 2009 to participate in the research. Of the three schools, two responded. The response from both schools' headmasters was positive though permission for data collection could only be made following the winter school holidays. After this break one of the headmasters explained his school was unable to participate in the research as his learners did not have any free time in their schedule. Contact was made with the other school's guidance counsellor and the process of obtaining parental consent from the learners' parents began. This took approximately two months to complete; following this an appropriate time to collect data was also determined. Permission to conduct research in this school was again given by the KwaZulu-Natal Department of Education.

Owing to the sensitive nature of the topic of this research, suicidality, it was found that many parents and guardians were uneasy about giving permission for their sons to participate in the research. This impacted the predicted sample size, and was an unforeseen difficulty.

Another difficulty was encountered when scoring the Suicide Ideation Questionnaire. It was disturbing to see some very high scores but the anonymity agreement constrained any action. It would be advisable for those researchers in the future who research a similar topic to do a workshop focusing on suicidality, stress, coping, and ways to get help in the schools where the research takes place, with the learners involved in the research. This could be done so as

not to single any one out as being at risk but should rather attempt a blanket approach to informing the participants about the topic.

Suggestions for further research

Owing to the restriction of the length of the masters dissertation as well as the sensitive nature of the topic, there were some aspects that could not be investigated further in this study. These include, for example, an exploration of the specific items indicated by the participants. Because of time limitations as well as the need to preserve the anonymity of the respondents it was not possible to investigate further the reasoning behind choices made. As the study was quantitative the investigation was not justified but future qualitative studies may be able to elicit more detailed information from respondents and possibly determine what informs their choices or decisions on these topics.

The correlates of suicidal behaviour mentioned in the literature review are all important aspects of suicidal behaviour. In general, however, it was not possible to examine the relationship between these correlates, suicidal ideation and coping strategies in this study. Analysis of these correlates in relation to ideation and coping may elucidate valuable information that could inform prevention programmes in schools and other adolescent populations and possibly offer explanations for behaviour that have not been offered in this study.

Further research could look at the impact of culture, community and environment on coping strategies implemented by male adolescents as well as suicidal behaviour in male adolescent samples, though a larger, more varied sample would be necessary. The literature also suggests (Prior, 1999 in Frydenburg, 1999) that cultural context impacts gender and therefore the coping skills implemented by the individual, but this was not explored in the current study. This seems to be an important aspect of coping and seems to need further investigation specifically in the South African context. The country's multicultural constitution means an exploration of reactions to and beliefs about suicide in different cultures is also necessary. In this study the assumption was made that attitudes and beliefs about suicide across cultures would be similar enough to warrant little investigation into any possible differences. However, this may not be the case in the South African environment

and scrutiny of these differences would be beneficial. It seems necessary that a greater body of work in this broad area be created in the multicultural South African context.

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Appendices

Appendix 1

School of Psychology
P/Bag X01 Scottsville
PIETERMARITZBURG, 3209
South Africa
Phone: +27 33 2605371
Fax: +27 33 2605809

The Director General
Department of Education
Head Office
247 Burger Street
Pietermaritzburg
3200

14 March 2009

Dear Dr Lubisi

RE: Permission to conduct research

My name is Sarah Barnes and I am currently registered at the University of KwaZulu-Natal, Pietermaritzburg campus, as a first year masters student in clinical psychology. As part of my course I have to complete a research project. I hope to conduct my research in the area of suicidal ideation and coping skills looking particularly at the relationship between these two factors in a sample of adolescent boys at [redacted] in Durban. I have approached the headmaster of the school, Mr [redacted], and he has approved the research on condition I obtain permission from the Department of Education. I therefore was wondering if you would be able to grant me permission to conduct research at the abovementioned school, with a sample of grade 10 and grade 11 boys. Informed consent will be obtained from each learner's parents as well as informed assent from each learner. The learners will have the opportunity to decline or withdraw from the study at any time without penalty.

If you require further information on the project please do not hesitate to contact me.

I would greatly appreciate it if you could help me in this regard

Yours sincerely
Sarah Barnes

Email: [redacted]
Cell: [redacted]

Supervised by:
Prof D. R. Wassenaar
Registered Clinical Psychologist

Appendix 2

School of Psychology
P/Bag X01 Scottsville
PIETERMARITZBURG
3209
South Africa
Phone: +27 33 2605371
Fax: +27 33 2605809
14 March 2009

The Principal
[redacted]

Dear Mr [redacted]

Permission to conduct research

I would like to invite the grade 10 and 11 learners to participate in a study which aims to explore the relationship between coping strategies and skills and levels of suicidal ideation in a sample of South African male adolescents. I hope to determine whether high level coping strategies correlate with low levels of suicidal ideation in this sample. I will be conducting this research as partial fulfilment of the requirements for obtaining a Masters degree in clinical psychology at the University of KwaZulu-Natal, Pietermaritzburg.

Participants who agree to participate in the study will be asked to complete three questionnaires, which will include some basic demographic information and two psychological tests assessing coping skills exhibited across a variety of situations (The coping across situations questionnaire) and levels of suicidal ideation (The suicidal ideation questionnaire). Each questionnaire will only need to be completed once by each learner. All three questionnaires will be administered at the same time. Approximately one 50-minute period will be required for learners to complete all three questionnaires.

All information collected is for scientific purposes only and will remain confidential. The school's name will be omitted, although a value description of the school will be included in the methodology section of the thesis. Learners' full names will not be used in filling out the study's forms so all responses will be anonymous. No one at the school will have access to any of the information collected. Questionnaires will only be accessible to the researchers. If the study raises upsetting issues for a learner the learner will be encouraged to seek advice from the school counsellor and the learner will be able to contact the researcher for further counsel or referral.

Participation in the study is entirely voluntary and there will be no penalty for not participating or withdrawing. All learners for whom we have parent consent will be asked if they wish to participate and only those who agree will complete the questionnaires. Moreover, participants will be free to stop taking part in the study at any time.

The results of this project will be presented as a thesis and submitted to the School of Psychology for examination. A summary report on the findings will be provided to the school. Should you agree to allow your learners to take part in this research I will contact you in order to set up a suitable date and time.

Should you have any questions about the study please contact me, at: [redacted], e-mail: sarah@thejoiner.co.za. Or my supervisor, Prof. Doug Wassenaar who can be reached at: [redacted].

Thank you for your time.

Yours sincerely
Sarah Barnes
Masters' Student in Clinical Psychology
University of KwaZulu-Natal

Appendix 3

School of Psychology
P/Bag X01 Scottsville
PIETERMARITZBURG, 3209
South Africa
Phone: +27 33 2605371
Fax: +27 33 2605809

To be completed by Principal/Head Teacher of participating school

Declaration of Consent

I have been informed about the aims and procedures involved in the research project described above.

I reserve the right to withdraw any child at any stage in the proceedings and also to terminate the project altogether if I think it necessary.

I understand that the information gained will be anonymous and that children's names and the school's name will be removed from any materials used in the research.

Name: _____

Signed: _____

School: _____

Date: _____

Appendix 4

School of Psychology
P/Bag X01 Scottsville
PIETERMARITZBURG, 3209
South Africa
Phone: +27 33 2605371
Fax: +27 33 2605809

2 April 2009

Dear Parent or Legal Guardian

INFORMED CONSENT - PARENT PERMISSION LETTER

My name is Sarah Barnes and I am a clinical psychology masters student at the University of KwaZulu-Natal in Pietermaritzburg. I am conducting a research study, which aims to explore the relationship between coping skills and levels of suicidal ideation in adolescent males. Suicidal ideation refers to any thoughts, or actions regarding suicide. Ultimately, our hope is to learn if there is a positive relationship between high levels of coping and low levels of suicidal ideation in this specific sample. With the permission of the KwaZulu-Natal Department of Education and the school's Headmaster, we are requesting that you allow your child to participate.

Participants in the study will be asked to complete 3 questionnaires, one including demographic information, one relating to levels of suicidal ideation and the final one about coping skills and strategies. The questionnaires will only need to be completed once each. All three questionnaires will be completed at the school during the same single session.

The results of the study could generate important knowledge in the area of suicidal ideation and adolescence in the South African context. Should the questionnaires raise any upsetting issues for any of the participants they will be encouraged to approach their school counsellor or the researcher for advice or referral.

All information collected is for scientific purposes only and will remain confidential. Only research numbers will be used in completing the questionnaires so all responses will be anonymous. No one at the school will have access to any of the information collected. Questionnaires will only be accessible to the researchers. Should the questionnaires raise an upsetting issue for a respondent that learner will be encouraged to consult the school's counsellor for advice or the respondent will be able to contact the researcher for further referral or guidance.

Participation in the study is entirely voluntary and there will be no penalty for not participating. All learners for whom we have parent consent will be asked if they wish to participate and only those who agree will complete the questionnaires. Moreover, participants will be free to stop taking part in the study at any time.

The results of this project will be presented as a thesis and submitted to the School of Psychology for examination and possible publication in a peer-review journal. A report on the findings will be presented to the school and those interested respondents and parents of those involved will be able to view the report.

Should you have any questions about the study please contact me via e-mail: masters.research09@gmail.com or my supervisor, Prof Douglas Wassenaar, who is also a registered clinical psychologist. He can be reached at: [redacted].

Please indicate your permission by signing the enclosed consent form and having your son return it to his class teacher.

Yours sincerely
Sarah K. Barnes
Masters Student in Clinical Psychology

Appendix 5

School of Psychology
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PIETERMARITZBURG, 3209
South Africa
Phone: +27 33 2605371
Fax: +27 33 2605809

Consent to Participate

I have read the attached informed consent letter and agree to allow my child to participate in this research project. I understand that he will complete three questionnaires, will be free to participate or withdraw at any time, and his identity will remain confidential.

_____

Learner's Name

_____

Learner's grade and form class

_____

Parent's or Guardian's Name (please print)

_____

Parent's or Guardian's Signature Date

Appendix 6

School of Psychology
P/Bag X01 Scottsville
PIETERMARITZBURG, 3209
South Africa
Phone: +27 33 2605371
Fax: +27 33 2605809

September 2009

Dear Participant

Informed assent to participate in a research study

I would like to thank you in advance for participating in my research project. This project aims to explore the relationship between coping skills and levels of suicidal ideation in adolescent males.

As a participant you will be asked to complete 3 questionnaires, one including demographic information, one relating to levels of suicidal ideation and the final one about coping skills and strategies. The results of the study could generate important knowledge in the area of suicidal ideation and adolescence in the South African context.

The results of the project will be presented as a thesis and submitted to the School of Psychology for examination and possible publication in a peer-review journal. A report of the findings will be presented to the school for those interested respondents and parents of those involved will be able to view the report.

All information that you write down is for scientific purposes only and will remain confidential. Full names are not asked for in the questionnaires. Anonymity will be ensured. No one at your school will have access to your results. Participation is entirely voluntary and you are free to refuse and free to change your mind and to discontinue participation at any time without judgement.

Should any of the questions in the three questionnaires you are about to answer upset you in anyway you are encouraged to approach your school's counsellor, [redacted], for support. If you would prefer to make an appointment with the psychologist affiliated to your school please do so. He can be contacted on [redacted].

You are also welcome to approach the researcher for further advice and referral on a matter pertaining to this research. The researcher can be contacted by email: masters.research09@gmail.com or by telephone: [redacted].

YOUR SIGNATURE BELOW MEANS THAT YOU HAVE READ AND UNDERSTOOD THE INFORMATION ABOVE, AND HAVE DECIDED TO CONSENT TO BEING A PARTICIPANT IN THIS STUDY.

_____ _____

Signature of learner/participant Date

Appendix 7

Demographic questionnaire

This questionnaire forms part of an investigation into the relationship that exists within a learner between coping strategies and suicidal ideation (thoughts about suicide). The information collected will only be used for this research and the identity of participants and the school will not be disclosed. Your name should not appear on any sheet. This is not a test of any kind. Please answer as honestly as possible.

We would like a few details from you:

Gender: _____
Age: _____
Home language: _____
Population group: _____
Please tick the appropriate box.

Black African	☐	Coloured	☐
Indian	☐	Asian	☐
White	☐	Other	☐

Given South Africa's chequered past we understand that information regarding population group is a contentious issue and may seem irrelevant. However, it has been deemed necessary for this particular study. The classifications used in this questionnaire have been taken from Statistics South Africa: www.statssa.gov.za. These are the classifications used in the national census.

Appendix 8

CASQ-R

We want to find out what you do when there are problems in the following eight problem domains:

1. school, 2. parents 3. peers, 4. leisure time, 5. partner, 6. self, 7. job, 8. future.

Please start with the first problem area "school" and mark **all the strategies you usually employ** when you have a school-related problem. Then continue with "parents" and so on.

When a problem in this area comes about, → I do the following: ↓	1 School	2 Parents	3 Peers	4 Leisure time
1. I discuss the problem with my parents/other adults				
2. I talk straight away about the problem when it appears and don't worry too much				
3. I try to get help from institutions (youth counselling)				
4. I expect the worst				
5. I accept my limits				
6. I try to talk about the problem with the person concerned				
7. I behave as if everything is all right.				
8. I try to let my aggression out (with loud music, riding my motorbike, wild dancing, sport etc)				
9. I don't worry because usually everything turns out all right.				
10. I think out the problem and try to find different solutions				
11. I make compromises				
12. I let out my anger or desperation by shouting, crying, slamming doors etc.				
13. I tell myself that there will always be problems				
14. I only think about the problem when it appears.				
15. I look for information on the internet, in magazines, encyclopaedias, or books.				
16. I try not to think about the problem				
17. I try to forget the problem with alcohol or drugs				

18. I try to get help and comfort from people who are in a similar situation				
19. I try to solve the problem with help from my friends				
20. I withdraw because I cannot change anything anyway.				
21. My beliefs/spirituality help me				

CASQ- R

When a problem in this area comes about, → / I do the following: ↓	5 Romantic partner	6 Self	7 Job	8 Future
1. I discuss the problem with my parents/other adults				
2. I talk straight away about the problem when it appears and don't worry too much				
3. I try to get help from institutions (youth counselling)				
4. I expect the worst				
5. I accept my limits				
6. I try to talk about the problem with the person concerned				
7. I behave as if everything is all right.				
8. I try to let my aggression out (with loud music, riding my motorbike, wild dancing, sport etc)				
9. I don't worry because usually everything turns out all right.				
10. I think out the problem and try to find different solutions				
11. I make compromises				
12. I let out my anger or desperation by shouting, crying, slamming doors etc.				
13. I tell myself that there will always be problems				
14. I only think about the problem when it appears.				
15. I look for information on the internet, in magazines, encyclopaedias, or books.				
16. I try not to think about the problem				
17. I try to forget the problem with alcohol or drugs				
18. I try to get help and comfort from people who are in a similar situation				
19. I try to solve the problem with help from my friends				
20. I withdraw because I cannot change anything anyway.				
21. My beliefs/spirituality help me				

Appendix 9

Suicide Ideation Questionnaire

Side Two Directions

Listed below are a number of sentences about thoughts that people sometimes have. Please *indicate which of these thoughts you have had in the past month*. Fill in the circle under the answer that best describes your own thoughts. Be sure to fill in a circle for each sentence. Remember, *there are no right or wrong answers.*

This thought was in my mind:	Almost every day.	Couple of times a week.	About once a week.	Couple of times a month.	About once a month.	I had this thought before but not in the past month.	I never had this thought.
1. I thought it would be better if I was not alive	○	○	○	○	○	○	○
2. I thought about killing myself	○	○	○	○	○	○	○
3. I thought about how I would kill myself	○	○	○	○	○	○	○
4. I thought about when I would kill myself	○	○	○	○	○	○	○
5. I thought about people dying	○	○	○	○	○	○	○
6. I thought about death	○	○	○	○	○	○	○
7. I thought about what to write in a suicide note	○	○	○	○	○	○	○
8. I thought about writing a will	○	○	○	○	○	○	○
9. I thought about telling people I plan to kill myself	○	○	○	○	○	○	○
10. I thought that people would be happier if I were not around	○	○	○	○	○	○	○
11. I thought about how people would feel if I killed myself	○	○	○	○	○	○	○
12. I wished I were dead	○	○	○	○	○	○	○
13. I thought about how easy it would be to end it all	○	○	○	○	○	○	○
14. I thought that killing myself would solve my problems	○	○	○	○	○	○	○
15. I thought others would be better off if I was dead	○	○	○	○	○	○	○
16. I wished I had the nerve to kill myself	○	○	○	○	○	○	○
17. I wished that I had never been born	○	○	○	○	○	○	○
18. I thought if I had the chance I would kill myself	○	○	○	○	○	○	○
19. I thought about ways people kill themselves	○	○	○	○	○	○	○
20. I thought about killing myself, but would not do it	○	○	○	○	○	○	○
21. I thought about having a bad accident	○	○	○	○	○	○	○
22. I thought that life was not worth living	○	○	○	○	○	○	○
23. I thought that my life was too rotten to continue	○	○	○	○	○	○	○
24. I thought that the only way to be noticed is to kill myself	○	○	○	○	○	○	○
25. I thought that if I killed myself people would realize I was worth caring about	○	○	○	○	○	○	○
26. I thought that no one cared if I lived or died	○	○	○	○	○	○	○
27. I thought about hurting myself but not really killing myself	○	○	○	○	○	○	○
28. I wondered if I had the nerve to kill myself	○	○	○	○	○	○	○
29. I thought that if things did not get better I would kill myself	○	○	○	○	○	○	○
30. I wished that I had the right to kill myself	○	○	○	○	○	○	○

TS	
TOTAL %	
_____ %	

CI	